THE MEDICAL JOURNAL OF AUSTRALIA

VOL. II.—28TH YEAR. SYDNEY, SATURDAY, AUGUST 9, 1941. No. 6.

Table of Contents.

[The Whole of the Literary Matter in THE MEDICAL JOURNAL OF AUSTRALIA is Copyright.]

	Page.
ORIGINAL ARTICLES—	
The Bancroft Memorial Lecture—Fear as a Factor in Disease, by H. Hume Turnbull	131
Social Aspects of Medicine, by John Dale	135
Some Problems of Medical Sociology, by Ramsay Mailer	140
REVIEWS—	
Malignant Disease and Radium Treatment	142
LEADING ARTICLES—	
Medical Sociology: The Need for Action	143
CURRENT COMMENT—	
Boils	144
The Administration of Iron to Blood Donors	145
A Glossary of Psychological Terms	145
The Journal of Clinical Endocrinology	145
ABSTRACTS FROM MEDICAL LITERATURE—	
Physiology	146
Biological Chemistry	147
BRITISH MEDICAL ASSOCIATION NEWS—	
Scientific	148
NAVAL, MILITARY AND AIR FORCE—	
Appointments	152
CORRESPONDENCE—	
Vaccine Therapy	154
POST-GRADUATE WORK—	
Course in Surgery at Sydney	154
Library Seminar at Sydney	154
OBITUARY—	
Francis Antill Pockley	154
UNIVERSITY INTELLIGENCE—	
The University of Sydney	156
NOMINATIONS AND ELECTIONS	156
BOOKS RECEIVED	156
DIARY FOR THE MONTH	156
MEDICAL APPOINTMENTS: IMPORTANT NOTICE	156
EDITORIAL NOTICES	156

The Bancroft Memorial Lecture.[1]

FEAR AS A FACTOR IN DISEASE.

By H. HUME TURNBULL,
Melbourne.

Very softly down the glade runs a waiting, watching shade,
And the whisper spreads and widens far and near.
And the sweat is on thy brow, for he passes even now—
He is Fear, O Little Hunter, he is Fear!

RUDYARD KIPLING.

IT is not my intention to speak tonight of the influence of fear of sudden and violent death upon physical well-being. This fear is felt today by many millions of people, and the striking fact has already emerged that the evil physical and mental results of this emotion which were predicted by many have not come to pass. Mental diseases and the more severe grades of neurosis do not appear to have been much in evidence after the bombing of London and other towns in England; in fact, some authorities insist that these have been actually reduced, though this may be attributable to early evacuation of the weaker vessels amongst the population. It is reasonable to suppose also that the opportunity for useful work given to many who, in normal circumstances, had too much spare time on their hands, has diverted their minds from their own troubles with the usual admirable therapeutic results. Psychiatrists in all countries appear to agree that there is no evidence that war strain is ever a cause of insanity in normal persons.

I propose rather to discuss the effect of another type of fear, the insistent and personal fear of serious disease within the man himself. The wide publicity given nowadays to medical matters has resulted in some good to the nation at large, as no doubt a considerable proportion of the people are beginning to appreciate the value of sound living and the help that is given by the trained hygienist in preserving the nation's health and prolonging the normal expectation of life. The improvement in this direction in the last half-century is enormous, though most of us fail to appreciate the steady work that has brought it about and take it all for granted as a kind of natural evolution.

When, however, the attention of the public is directed to matters concerned with the health of the individual rather than the mass, a very dangerous field is entered and it is probable that the harm done outweighs the good.

The total number of symptoms produced by disease is comparatively limited, and very similar complaints may be associated with a large number of different causes, so that it is difficult for even the trained mind to grasp the picture of a disease from its written description, while words are used so loosely in the description of discomforts that much care and skill may be needed to discover exactly what a patient does feel. This makes it easy for a person whose attention has been directed to a disease to recognize in the description of it a number of symptoms which he has been conscious of in himself and thus to conclude that he must be suffering from it. This would be of little importance if he sought skilled advice, stating clearly what he was afraid of and why; but, either from a fear that he would look foolish if no disease were found, or from dread lest his fears be well grounded, he frequently fails to do this, but seeks information outside the profession, either from books or from among his acquaintances, many of whom are only too glad to air their sorry stock of alleged medical facts, and very rarely give much comfort to the sufferer, though they may give a great deal of advice. Thus, by the time such a person seeks medical aid he may have acquired a large and unhealthy collection of fears and suggestions, which he will not readily reveal except under skilful questioning after his confidence has been gained. A further and even

[1] Read at a meeting of the Queensland Branch of the British Medical Association on June 6, 1941.

worse state is reached if the patient knows that some definite abnormality is present, such, for example, as a raised blood pressure.

It has become the fashion to describe this condition as an anxiety neurosis, which is a comforting title because it throws the whole blame on the individual and his "weak" nervous system, and various methods of treatment along these lines are suggested in the hope of uncovering some subconscious fear or strengthening the patient's nervous resistance. No doubt there is value in this; but I would plead for a more honest attitude to many of these cases, an attitude which would aim at preventing rather than curing the condition. We should recognize that in many people disease is due simply to fear of disease, a fear implanted in the individual by his associates, his reading, or frequently his doctor, and that a confident reassurance at the beginning of his trouble would have meant that no illness developed and the man would have been able to continue at work, after perhaps a short period of rest or treatment. Admittedly such a man is frightened and ready to believe the most serious news about himself, but he will usually welcome good news, especially if a reasonable explanation of his symptoms is supplied, and he is assured that we realize that they are not imaginary.

If, on the other hand, he feels that his doctor regards his complaints as fanciful, he may seek the kindly ministrations of the quack. The quack is, of course, a product of human fear, whose power is greatly increased by the inability of the medical art to relieve or cure many diseases, and by the feeling which lies at the back of every man's mind that there must be some way of righting the wrong, and if he misses the opportunity offered him by the quack's treatment, he may die or be crippled when he might have been saved.

Providing that the disease for which quack treatment is being taken is actually present, no great harm may be done, though valuable time may be lost; but the field of real disease not handled adequately by the legitimate profession is not nearly large enough to support our army of nostrum pedlars, with the result that disease has to be suggested to the patient or his own fears have to be supported, in order that they may be saved from want. If the quack's treatment is successful, a great feat has been performed; if not, it is just too bad. The sad part of the quack's failures is that a well-established suggestion is very hard to remove and the doctor may fail too. In such a case all the blame will be his, for the quack is judged by his successes only, never by his failures, while the public does pay the doctor the compliment of taking it for granted that he will succeed as a rule and that his failures are worth remark and criticism.

It must have fallen to the lot of most practitioners to be consulted by men who are profoundly depressed because they have read some of the more wicked advertisements which pick out the common symptoms of fatigue, discontent and anxiety, and assure the reader that they are due to high blood pressure, uric acid excess, or whatever condition the particular specific is supposed to cure. If such a person is perfectly sound and has no signs of the condition he fears, he may be reassured readily; but if he is aware of some rise of blood pressure, the physician's task is greatly increased, because the fear of impending disaster is renewed whenever any of these almost universal symptoms recur. A further heavy weight of evil suggestion is brought to bear on the unfortunate patient by his friends, who have talked over his sad state, and that of others like him, on many occasions, and will tell him how Brown used to get giddy and is now dead, Smith had headaches and now has a stroke and Jones, who was very red in the face, died on the golf course. Though they know practically nothing of the facts relating to these men's health, their views impress the patient and make his cure much more difficult, and at times impossible.

If this is so when the evil suggestions are made by laymen or by an outsider whose interest is solely in selling him something, how much more serious will be the consequences if the doubts and fears have been implanted by a medical man, who has had the opportunity of examination and investigation?

Illustrations could be given from almost any branch of medicine; but perhaps this problem is more insistent in relation to cardiac conditions than to any other. One of man's greatest fears is that he may die suddenly without warning, and I am afraid that the profession is not guiltless in this regard, for it is a common experience to be told by a patient that his doctor has warned him that he must avoid all exertion and that if he does not do so he may die suddenly. This may be true; but in the great majority of cases there is no special reason to fear such an ending, and in any case no good is done and much harm may follow such a statement. Sudden death is a likely event in certain forms of heart disease, but the majority of the sufferers, even from these forms, do not die suddenly. A confident denial of the likelihood of such a catastrophe relieves the man's mind of a grave load and will turn out to be sound prophecy in most cases, though it may be proper to inform a wise relative or friend that such a risk is present. It is this fear of sudden death that has given to *angina pectoris* the horror which most people feel for it, a horror so great that the name should be abandoned altogether. It is remarkable how little impressed a patient is by the verdict that the pain from which he suffers is due to his heart, provided the term angina is not used, especially if his inquiry as to whether it is *angina pectoris* is answered with a definite negative. However, as a result of all this, any pain in the front of the chest is regarded by the public as probably due to some heart condition, and such a diagnosis is supported by the belief, still prevalent in spite of much evidence to the contrary, that the heart can be strained and permanently damaged by exertion. The blame for the survival of this fear seems to lie chiefly with those associated with athletics of various kinds, though the evidence which they give is confusing and indefinite, and in most cases has no relation to clinical observations. Much careful work by trained observers has shown no evidence of such strain; Mackenzie, Lewis, Creighton Bramwell and many others have failed to find any case in which it had occurred, and statistics show that athletes have at least a normal expectation of life. This conception of the baneful effects of strain is, however, the starting point of much distress of mind when a man becomes conscious of his heart's action for the first time.

An evil suggestion is always more powerful than a good one, and the notion that the healthy heart can be strained by exertion is deeply implanted in the public mind, so that when symptoms of pain or faintness occur after strenuous exercise the stage is set for tragedy.

The symptoms of so-called "inorganic" or "functional" heart disease are very common among soldiers as well as in civil life, and in the former they are a feature of the back areas and not the fighting front.

I have inquired from many men who were regimental medical officers in the last war, and they tell me that they did not find that cardiac symptoms were complained of to any extent, though, of course, general neurosis was common enough. The cardiac symptoms developed later, and undoubtedly in many cases they were suggested to the man by his fellows or by some doctor. This is the significant fact which must be faced by all of us. By a nervous person who experiences some unaccustomed sensation, any suggestion of evil is readily taken up and becomes firmly fixed, and a tremendous responsibility rests on the medical man who sees the patient first and whose verdict may colour the whole of the rest of his life. Many factors combine to increase the difficulty of the problem, one of the most serious being the stress which has been laid on coronary occlusion of recent years and which has greatly impressed the public, reinforcing the old terror of "angina".

It is, of course, easy to recognize a classical coronary occlusion with severe pain and shock, especially if the electrocardiogram is typical; but the cases which give great difficulty are those in which the pain is not severe or at least is of short duration, other symptoms are few or confusing and the patient is going about as usual and insists that he feels none the worse, and those in which

the pain is slight but long lasting, of unusual distribution and accompanied by few, if any, other symptoms.

The dilemma is a serious one, because on the one hand, if a true coronary lesion is present, complete rest is demanded, whereas if the condition is not due to organic cardiac disease a definite reassurance is absolutely essential if the patient is to be rescued from a persistent fear. Many authors tell us that the problem is not very difficult, but I must confess that I have found it insoluble on occasions and have been obliged to consider how best to serve the patient's interests in spite of my ignorance. A little thought shows that the worst possible service to him is indecision, which, like the old advice to go carefully, passes all responsibility to the unfortunate sufferer with the addition of a heavy load of fear for the future, because it is clear to him that the doctor is afraid that the heart is diseased and that any untoward effort may be fatal.

We must therefore make up our minds definitely before we can give advice; but it is not, I feel, essential that we should make an immediate correct diagnosis, provided the final decision when made is definite. If it seems probable that a condition is present which demands rest, put the patient to bed at once and keep him there till a diagnosis is made, and then if you are satisfied that all is well, an explanation that full and careful investigation has shown that there is no disease and that he may safely resume his normal activities will ensure that no damage has been done beyond the waste of a few days. Even this is often not all waste, since the symptoms have no doubt given rise to apprehension, and this is allayed by the knowledge that nothing abnormal has been found on careful research.

If it is felt that real damage is probably present, an explanation of the condition and of the need for prolonged rest so that the damage may be healed and not merely patched up, and a confident, reassuring attitude during the course of the illness, will avoid any consequent neurosis, and even if an error has been made, the only harm will be the waste of time.

If, one the other hand, a non-cardiac lesion is viewed as a cardiac damage and the patient is made to stop work and rest for a time without complete explanation, and then is kept pottering about without any definite object, a neurosis will frequently follow, and no amount of persuasion later will enable him to regard his heart as sound and trustworthy.

With regard to persons whose symptoms suggest chronic heart disease without any active condition and those who are in the stage of advanced convalescence after a definite coronary occlusion, the problem is not so difficult, since it is possible now to try the effect of exercise and be guided by the results. The patient is usually apprehensive, fearing that any exertion may do harm, and especially does he fear sudden death, so that it is helpful to point out that this risk has now passed, and that minor symptoms, especially pain which is very likely to appear, can be safely disregarded and will soon cease to be troublesome. If this assurance is not given and perseverance in exercise is not insisted upon, a person who is quite capable of leading an active life may become a complete invalid, and when there is a background of known disease, it is very difficult to overcome an established fear.

The physician must decide just how soon activity should begin and how much the patient should attempt, and must make sure that any symptom is carefully weighed and its significance or otherwise pointed out, always taking into consideration the temperament of the individual.

The usual suggestion that graduated increases in exertion should be carried out sounds excellent, and no doubt would be successful if patients had no fear at all; but in practice one finds that the patient is unable to avoid searching himself for symptoms during and after the exertion, and, if any appear, he becomes downcast and watches more carefully next time; so the symptom appears a little earlier, until soon he is afraid to do anything because it seems to him that everything is beyond his physical powers.

It is hardly fair to add this extra strain to his troubles, and far better results are obtained by balancing carefully the advantages and risks of any form of exertion and then, having decided that it is safe, letting him go on and disregard symptoms, unless they reach a stage which shows that a change of plan must be adopted. With most men some game or some work will be found much more helpful, or at least some activity which is an end in itself and serves to keep the patient's mind off his health.

Another source of cardiac neurosis is post-operative information of an alarmist character. I would plead with surgeons and anæsthetists to be very careful in their comments when a patient at or after an operation has exhibited some cardio-vascular symptoms of a disquieting kind. It is very tempting to explain the whole difficulty as due to a preexisting cardiac weakness and to warn the patient, directly or by implication, that if any further operative procedures have to be undertaken he should tell the surgeon that special care is necessary in his case. As a matter of fact, even quite seriously damaged hearts stand anæsthetics well, and the cause of the upset is usually some technical fault or a peripheral failure due to shock or hæmorrhage. It is a common experience that people who have behaved in this way stand further surgical adventures quite well; but if they are led to believe that their former narrow escape was due to a permanent cardiac weakness, irrecoverable damage may be done.

I was told recently by a woman that her surgeon had assured her that her heart would never permit her to do her housework again. Twelve months later she was an invalid and largely bedridden as the result of attacks of tremor and palpitation, though examination revealed a healthy woman with a heart and vascular system which were perfectly normal apart from a slight rise of systolic pressure.

It is very improbable that the surgeon did make this remark; but whatever he said was so interpreted. In consequence, permanent and, I fear, irreparable harm has been done to a patient who had been apprehensive all her life. She is now an invalid.

Still another factor in the production of cardiac neurosis is the fact that many of our modern methods of diagnosis have proved to be two-edged swords, because both the public and the profession have endowed them with powers of diagnosis far beyond their capacity, and with properties which they do not possess.

No doubt the manometer has greatly helped the study of cardio-vascular problems, but to the public it has been a terrible destroyer of happiness. No doubt it is well that we should obtain all possible accurate knowledge about our patients, but the blood pressure reading is only one isolated fact, and those of you who have had experience of medical examinations for government positions, and more especially on recruiting boards, realize what a tremendous influence apprehension has on the height of the reading. All manner of fantastic blood pressures are found at recruiting boards which in many cases are known to the subject's own medical man to be much above the usual, and we do not know whether this is a normal response in the healthy man of middle age to discomfort, worry, apprehension and general self-consciousness, or whether a high proportion of these men will develop true hyperpiesis later on. Some valuable facts may emerge later as a result of these examinations, but at present it appears probable that nervous influences are able to raise both systolic and diastolic pressures many degrees higher than most of us suspected, and I think that these observations might be turned to a good purpose now if they were used to comfort nervous subjects whose blood pressure was found to be raised. Of course, hypertension is a potent cause of invalidity and death; but it is also compatible with many years of active, useful life, and unless active treatment of proved value is to be undertaken it is a cruel error to stress the importance of a raised blood pressure.

An immense amount of work is being done on the subject, and some useful results may emerge, especially in the relationship of the disease to kidney infections; but, until we are able to apply the results of such work definitely and accurately to our cases, I feel sure that we can do more good by reassurance and the instillation of confidence and hope than by futile treatment and attempts

to save our medical "face". Especially I would urge the searching of our hearts and our records for justification of the usual instructions to alter the diet and avoid physical exercise. Is there any real evidence that a normal, well-balanced diet is harmful to such patients? There is no doubt that restrictions are harmful, since at every meal they remind the unfortunate patient of his sad state. For thirty years I have been searching for evidence that physical exertion is a factor in the causation of cerebral vascular accidents, and have asked many hospital resident medical officers and many old general practitioners to let me know of any such cases which come under their observation. I have not heard of a single case, though I know of many men who have had all their pet activities cut off, and who have later sustained a cerebral hæmorrhage or thrombosis while at rest. An immense amount of unhappiness is still being caused by such restrictions, and we must accept a large share of the blame.

It is high time that the medical profession revised its views on low blood pressure, in the light of figures published by life assurance companies, as well as in the light of our own experience. Frequently patients tell us that they are suffering from low blood pressure, and that this is the cause of their lack of energy, palpitation, nervousness or what not. Usually examination reveals a quite normal range of pressure, but there are a number of people whose systolic pressure is about or even below 100 millimetres of mercury. H. J. Starling, in the February number of *The Practitioner*, quotes figures from a large life assurance company in the United States of America, which reviewed 3,309 persons of all ages in whom the maximum systolic pressure was below 100 millimetres of mercury. The actual mortality rate among these people was only 35% of that expected, whereas the company's general death rate was 80%. Similar, if less definite, findings are available from many sources, and we can with confidence assure our patients that the only serious risk from this low blood pressure is longevity.

Of course, reduced blood pressure does occur at times as the result of systemic infections, and careful search must be made for them; but it is extremely improbable that the low pressure will be the only indication of such infection, and the figures quoted above show that a lower pressure than is usually accepted is normal for many people. This being the case, it is wrong and mischievous to tell a patient that he is suffering from low blood pressure, except in the rare cases of postural hypotension or frequent vaso-vagal attacks (and many of these cases are dependent on a hypersensitive nervous system and will yield to sedatives). These are met with so infrequently that they need not concern us here.

Another powerful competitor in this field, of baneful doubt is now active in the shape of the electrocardiogram. This impresses the members of the public greatly, and they, and apparently some doctors, seem to think that it is capable of deciding all questions of a man's cardiac capacity almost offhand; many feel that without it no sound opinion can be given.

As those of us who have worked along these lines know well, the truth is far otherwise. The machine gives us only a curve, one fact in the clinical picture, and whether this is helpful or not depends on the skill of the man interpreting it and his knowledge of the other factors in the case. Many doctors, whose knowledge of electrocardiography is small, are unduly alarmed by abnormalities in these curves, and may communicate their fears to the patient. The pitfalls in the path of the man who tries to make a diagnosis from electrocardiograms without seeing the patient are many, and dire results have followed this undesirable practice. The electrocardiogram, like the X-ray film, is the product of a machine and a technician, medical or lay; its correct interpretation has demanded long study and a vast amount of careful work in many lands, and the character of the curve added to the many other facts gleaned from the history and clinical examination of the patient may yield a diagnosis; but in very many cases its use is quite unnecessary. Even now we do not know the full limits of the normal, and a clearly abnormal electrocardiogram may have no relation to the present disease, for an abnormal picture may persist even though the damage is repaired to all practical purposes. Electrocardiograms are of little or no value in prognosis, once the diagnosis is clear, and if a patient is to be kept to very restricted activities because the electrocardiographic picture remains abnormal, many invalids will be created unnecessarily. A man who has had a coronary occlusion has, in the majority of cases, a limited life expectancy, and should be helped to make the best use of what remains. Fortunately the public veneration of machines may be employed helpfully, and a careful examination including electrocardiogram and skiagram is often more convincing to the patient than the perfectly sound advice that there is nothing wrong with his heart and he need not waste his money on these lower things.

I have seen the complete cure of "functional" cardiac pain result from the taking of an electrocardiogram. The patient was a man who refused to be convinced that it was safe for him to work, but who thought the electrocardiogram was a very up-to-date method of treatment; he remained well for two years after its application, though he never returned to hear what the findings were on the developed print. It is interesting to note that when he relapsed after an economic strain some four years later he provided a rich harvest for quacks for about a year before he returned for investigation and reassurance, which once more rapidly restored him to health.

Fears of this kind are contagious, and many examples can be given to show how congregation of such sufferers has increased the severity of the symptoms. Perhaps the best example is found in military service, where many men are perforce kept for long periods in hospitals and convalescent camps, with little to interest them except their own ailments and those of their fellows. It is easy to understand how, in such an environment, unusual sensations are magnified into great fears. The common absence of purposeful employment provides a regular hotbed for the seeds of fear, and just as the man crippled by wounds or injury is restored, not only to physical usefulness but also to mental health by exercise and education in the workshop, so is the whole outlook of the man with "functional" cardiac symptoms changed by the demonstration that his heart will carry him through quite strenuous exertion provided that he does not hamper it through morbid fear of harmful consequences, by throwing out of gear the finely graded adjustments which Nature has provided to ensure the proper functioning of the whole circulatory system. He should be told that he will probably suffer some discomfort at first, but must disregard it and keep his mind on his job, and the discomfort will gradually disappear. Tell him how rarely true cardiac disease has appeared amongst cases classed as "D.A.H." in the last war, and how few of these men have died up to the present time, and let him see that it is his own fault if he spends the rest of his life as a crawling fear-ridden pensioner.

The process of recovery, if the condition is at all severe, is by no means pleasant, and help, forbearance and support will be needed from the medical and lay reeducators; but any maudlin sympathy is entirely out of place and will defeat its own object. As well might we advise the man with a sprained ankle not to move it because the movement causes pain. Simple physical drill and graduated exercise is of little value; there must be a point to the exercise, a job to be done, since without this the man will find it very difficult to avoid watching for symptoms, and so probably by autosuggestion producing them.

Such baneful mass suggestions are helped by the daily Press, which publishes articles telling of the terrible after-effects of strain, gas and other factors to which most soldiers will have been subjected. A glaring example occurred after the last war, when every paper was full of the terrible effects produced by gas, and it appeared that anyone who had been subjected to it must have suffered permanent harm. As this included nearly every fighting soldier, it was a somewhat gruesome prospect for the world. Unfortunately, the voices of the men who were working patiently and practically at experiments on

these subjects were not heeded. They supported the very unromantic doctrine that there was little or no evidence that any permanent damage was done to the pulmonary tissues, and that unless obvious symptoms had occurred at the time, gas need not be considered as a cause of later invalidity.

This has been shown to be perfectly correct, but the harm was done. Many returned soldiers are honestly convinced that their lungs will never be the same again, and every kind of respiratory condition is accepted as a result of gas, even though precisely similar states are common in civil practice. This is not due to any wickedness in the men—though surely the Press should pause before sowing such deadly seed—but to fear on their part. A poison gas is used, and they see the deadly effects of full dosage on many of their comrades, and feel that some degree of damage must occur if they are subjected to even small doses of the same gas, not realizing that the damage is only transitory and not deep-seated and that no permanent harm results.

A tremendous responsibility rests on the medical profession here and now. We invented shell shock and "D.A.H." in the last war and accepted the doctrine of chronic gas damage, but there was the excuse that we were new to such conditions and did not realize what harm we were doing. There is no such excuse now. Many of us have had experience in the treatment of soldiers and in repatriation problems; all of us have had the opportunity of seeing and hearing these things, and should be able to realize that a war pension is a calamity and not in any way an asset to a good man, and that a vast number of pensions need never have been given if the men had not felt that they were damaged and could not exert themselves safely.

No doubt new causes for fear will arise this time, and we shall be told that it is impossible that men should have been subjected to their influence without permanent damage; but if the medical profession, as a whole, will refuse to accept any such theory till it is shown to be true and will reassure the patients rather than reinforce their fears, there is little doubt that the number of permanent invalids among returned men will be greatly reduced and the sum of human happiness greatly increased.

Such an attitude will be unpopular; the men may feel that we are unsympathetic and antagonistic, but if the profession as a whole refuses to be stampeded into accepting lay dictation, whether military or civil, many fine men will be saved lives of misery and fear and be restored to active, self-respecting and successful toil.

I have tried to emphasize the evil effects of fear of disease, which is bred sometimes from the dogmatic and ignorant advice of laymen, sometimes from the wilful deceit of the quack, but only too often from lack of wisdom in members of our own profession. I have shown that in medicine, as in war, useful machines may be employed in a most harmful way, and that in medicine, as in war, unprincipled propaganda may lead ignorant masses to their doom. May I conclude by expressing the hope that our successors in medicine, aware of these facts, will strive to treat the man as well as his disease, and that there will be in the future a less plentiful crop of what may be termed "doctor-made invalids".

SOCIAL ASPECTS OF MEDICINE.[1]

By JOHN DALE,
Melbourne.

SOCIAL aspects have always been appreciable in medical practice. The poor have always been with us and the medical profession generally has done what it could, under varying conditions, to alleviate the sufferings of the poor. Similarly, doctors have always realized and accepted the fact that poverty imposed limitations which gravely hindered both treatment and prevention of disease among their poorer patients. They have felt how much more could be done for the patient if he could afford it and have inwardly resented the necessity of giving advice or suggesting treatment, such as prolonged rest, which they knew the patient would be unable to follow.

The record of the profession as a body is not without blemish, however. Drummond and Wilbraham, in their recent book "The Englishman's Food", 1939, record how *The Lancet*, agitating in the early part of the nineteenth century for a better diet for paupers and other unfortunates, referred to the official indifference of the Royal College of Physicians and the Royal College of Surgeons: "If that sated Vampire flap its wings the effort is never to arouse or invigorate." The same authors recall how at the time of the South African war, when the Director-General of the Army Medical Service reported that he was having the greatest difficulty in obtaining sufficient men of satisfactory physique for service, Whitehall thought it might be possible to hold an inquiry into the matter, but before taking this step, decided first to consult the Royal College of Surgeons and the Royal College of Physicians. After long deliberations the replies of these august bodies were received. Both expressed the view that the Director-General of the Army Medical Service had not made out a case for believing that any deterioration of physique had occurred. The Royal College of Physicians reluctantly approved of the proposal for investigation, but pointed out that it might lead to quite erroneous conclusions, whilst the Royal College of Surgeons was of opinion that the inquiry would serve no useful purpose. An inter-departmental committee was nevertheless appointed, which produced, in due course, a valuable report.

Though in recent decades the condition of the poor and of their children, especially as the birth rate diminished, has tended to improve in many respects, the state of affairs, particularly since the last war, has been such that probably a majority of doctors have felt that things could not go on in such a way and that far-reaching changes in the social system would have to be made.

At the same time such developments were taking place in the science of hygiene that I confidently assert that an entirely new science of modern hygiene has come into being. When, in 1919, Sir George Newman, appointed as Principal Medical Officer of the newly created Ministry of Health, began to write that now famous series of reports and dissertations on the health of the nation, he published an "Outline of the Practice of Preventive Medicine", in which he included the statement that "even economic factors influenced disease"—tentatively—as a suggestion—as something new! I had, at that time, had enough experience in public health to resent the tentative character of the statement; but it serves to show how recent is at least the official recognition of the point of view, and later on I shall quote Dr. Thomas Parran, head of the United States Public Health Service, as giving only two years ago what is, as far as I know, the first thoroughgoing statement from any head of an important health department on this relationship of health and poverty.

During the intervening years the situation has become clear. The Registrar-General of Great Britain, in his unique and famous "Decennial Supplements", has recently classified the population of Great Britain into five occupational groups, which are really income groups, has calculated both general and specific death rates for each group, and has demonstrated that in general death rate, in infantile mortality, and in the most important of the special death rates from individual diseases (Figure I), including cancer in most sites, there is a clear relation between economic status, or income, and mortality. Selecting from the mortality tables of the Registrar-General the following six occupations—cotton spinners, chimney sweeps, gas stokers, bargemen, coal heavers and stevedores—and comparing them with all males over sixteen

[1] Read at a meeting of the Victorian Branch of the British Medical Association on June 4, 1941.

years of age and with professional men, we obtain the following standardized mortality ratios:

8,218 professional men	633 cancer	452 phthisis
532,628 all males	1,000 cancer	1,000 phthisis
5,311 selected trades ..	1,492 cancer	1,359 phthisis

The Registrar-General remarks that cancer at these sites shows very definitely the same social distribution as phthisis and that therefore a large proportion of cancer mortality is of a "highly preventible nature". A mass of similar evidence from all nations, most carefully compiled, has been published by Dr. René Sand, of the University of Brussels and the League of Nations in the book "Health and Human Progress: An Essay on Sociological Medicine", from which are extracted the following figures illustrating the relation of infantile mortality and father's wages in the United States of America.

Wages.	Infantile Mortality.
Equal to or over 1,850 dollars	38·3
Between 1,250 and 1,849 dollars	84·3
Between 850 and 1,249 dollars	69·9
Between 650 and 849 dollars	95·6
Between 550 and 649 dollars	107·9
Between 450 and 549 dollars	128·9
Below 450 dollars	164·8

We can hardly unite in the same statistics infants who are artificially fed (*a*), and those who are breast fed (*b*). Separating the two groups we obtain the following figures:

Wages.	Infantile Mortality.
Equal to or over 1,850 dollars ..	(*a*) 27·5, (*b*) 13·3
Between 1,250 and 1,849 dollars ..	(*a*) 130·1, (*b*) 23·2
Between 850 and 1,249 dollars ..	(*a*) 117·3, (*b*) 22·5
Between 550 and 849 dollars ..	(*a*) 185·4, (*b*) 46·1
Below 550 dollars	(*a*) 310·1, (*b*) 61·8

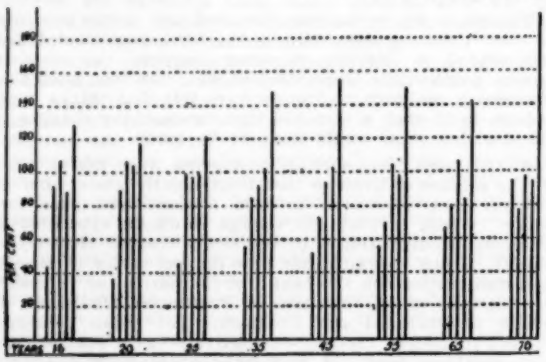


FIGURE I.

Social distribution of mortality due to respiratory tuberculosis. Mortality of each social class *per centum* of that of all occupied and retired males at different ages. From left to right the social grade represented by the respective lines (1 to 5) are: upper and middle class, intermediate, skilled workers, intermediate, unskilled workers.

During the same period, as a result mainly of the development of child welfare and school medical services in the British Empire and the United States of America, a huge amount of work has been done in the measurement of height and weight and their increments, and in the estimation of the prevalence of malnutrition and various deformities and of disease states among various groups of children. For example, the boys of twelve years of age attending elementary schools in Leeds in 1931 were just over four feet seven inches in height and 74·4 pounds in weight. They were far better specimens than the poor children of the town had been twenty years before, when figures of four feet four inches and 63·5 pounds had represented the average height and weight at this age; but they were still two inches and nearly eight pounds behind the well-fed boys at Horsham.

These records all point in the same direction, that not only are the death rates higher, but also the sickness rates, and that the children of the poor are stunted, deformed and weaklings compared with those in more fortunate circumstances.

Being more or less continuously concerned with the teaching of hygiene, I have appreciated the changing viewpoint. When Sir George Newman, twenty years ago, was insisting that health and disease were not things ("We realize now", he said, "that disease is not capricious"—I appreciated with delight that capricious meant behaving like *caper*, the goat—"but is due to causes which can be discovered, understood and prevented"), that was a novel and inspiring statement. Since then hygiene has moved far and fast. We have the new science of dietetics, with its huge contributions to our understanding, and a new science of ventilation and fresh air, for which we are so largely indebted to Sir Leonard Hill whose "Science of Ventilation and Open Air Treatment", published in 1919, contains most stimulating chapters on sociological medicine. And, perhaps most important of all, we have the new sciences of psychology, child psychology, pedagogics and modern psychiatry, all pointing to the vast possibilities of mental hygiene.

These advances are the basis of the new science of preventive medicine, far-reaching in its implications and revolutionary in the social sense. In order to suggest its outline, let me present to you the plan which I now follow when introducing a course of lectures on hygiene; it is briefly as follows:

I define "health"—pointing out that the word is commonly used in two senses—(i) as state or condition, for example, "good" or "bad" health, (ii) as good condition, as opposed to "disease". Etymologically, "heal" is related to "hale", "hail", "*heil*" and "whole"; and so "health" is equivalent to "wholeth" or wholeness, quite a good definition! The best definition, however, is that health is the quality of life. This emphasizes the importance of human health as the quality of human life—that is, the degree of goodness, fineness or excellence of human life. This is a conception clearly related to the value of human life; the conclusion, both of religious and of scientific thought; the aim of creation; the end of evolution! Relate this idea to the value which is actually attached to human life and its quality in western civilization, and to the status of "health" as a minor "subject" in schools and a minor "department" in government. The definition of health as the quality of life puts it on its proper pedestal as the true or proper aim of all education and of all the departments of a good government.

If health is the quality of life (and the quality of anything—the degrees of its goodness or badness—is a matter of opinion), how are we to judge it? We must have standards to judge things by. What is the standard for man and men? I then discuss man as a part of nature—the product of heredity and environment.

These factors are not "opposed", but essential and complementary. Heredity is design. The complete design is finished and concentrated miraculously in the nucleus of the fertilized egg-cell, the ovum, in the body of the mother at the moment of conception.

Considering heredity as design, I compare the designs of great buildings, hospitals, cathedrals *et cetera*. For these, we have plans and drawings of the finished buildings. We know what we want and intend to have, and when it is finished we can see whether it is complete or whole or healthy. But the human design is hidden, we cannot see it until it is finished, if it ever is finished, and each design is unique—different from all others. We know only roughly what to expect; and, if we do not like it when it is finished, it is difficult to say whether the design was faulty (heredity) or whether the human being has been improperly built (environment), or whether both factors are involved.

In the case of buildings, the architects supply us with "specifications"—directions for the building and completion of the design, the quantities and qualities of materials which must be supplied, in what order, at what time, and how they are to be joined together.

In the case of human designs (heredity), where are the specifications for completing the design? Well, Nature

has them and they are the essentials of health. They are environment. They are the factors affecting the quality of life (apart from heredity, the design which, on the whole, we have to take as given, for we cannot alter it). The search or study of nature for these specifications is the science of modern hygiene.

The following is a tentative classification of the factors affecting the quality of life—that is to say, "health": (i) diet; (ii) air; (iii) light; (iv) exercise; (v) mental factors (this heading embraces the effect on the person, the "body-mind", of social relationships—whether satisfying, happy and encouraging, or the reverse, with fear and other emotional stress; the factors are related to economics, education, current mortality *et cetera*); (vi) poisons; (vii) parasites.

If now we inquire what are the essentials of health, we find that this list serves as a guide, and that by putting a positive sign (+) (indicating adequacy or presence of) opposite numbers (i) to (v), and a negative sign (-) (indicating deficiency or absence of) opposite numbers (vi) and (vii), we have a fairly satisfactory list of the essentials.

If, on the other hand, we ask what are the causes of disease, we find that by using the same list and reversing the signs, placing a minus sign (-) opposite numbers (i) to (v) and a positive sign (+) opposite numbers (vi) and (vii), we have a list of the causes of disease. Thus, by using the same list of factors and reversing the signs, we appreciate that "health" and "disease" are not indeed things, but aspects or points of view in regard to the state or quality of life.

No longer do we think of our being naturally healthy unless we "catch" something; most sickness (poor quality) is due to not catching things! When a person goes to the doctor, he may think that he has "caught" something—and, indeed, there may be some sudden change in his condition or "acute illness", as we say; but it is obvious he may be suffering in respect of various combinations of the factors listed above. He may, for example, have been, and still be, ill-fed (number (i)), living and working in badly ventilated and lighted places (numbers (ii) and (iii)), working in a cramped position and without reasonable exercise (number (iv)), unhappy and anxious in respect of his employment and his domestic and social relations, obviously in many ways (number (v)). Further, he may be a heavy drinker or affected by an industrial poison (number (vi)); and finally, he may also be infected with tuberculosis, alone or in conjunction with several other germs of disease (number (vii)).

And he goes to the doctor and wants to know what he has "got"! Obviously, doctors and hygienists, in trying to look after the health of people and to assist them, have to consider all the above-mentioned factors in respect of each case or patient.

I suggest that this definition of health as the quality of life is valid and useful in a field where clear thinking and careful definition are urgently needed. Even an authority like Sand uses the word in what must be regarded as a vague and indefinite sense. Take, for example, the following statement: "The child is the product of its inherent instincts, its health, its physical and moral environment, its instruction and its experience." Such a use of the word is confusing. "The child is the product of its health"—indeed! The meaning Sand intends to convey is that the quality or health of the child depends upon its heredity and its environment—nothing more. The same writer states that "the influence of health on intelligence and character is as clear as that of heredity". What he probably means is that intelligence and character are clearly influenced by environment as well as by heredity.

The situation now is that the profession already appreciates or is coming to appreciate that there are two outstanding medico-sociological problems—namely, the prevalence of deficiency disease, particularly among, though not limited, to the poor, and secondly, the importance of psychological factors in disease.

The first of these, the prevalence of deficiency disease, has been and is being most intensively studied especially in relation to food, the primacy of which among the essentials of health is clearly unassailable. The contribution which has attracted most attention, perhaps, is the now famous publication by Sir John Orr, "Food, Health and Income" (1936), in which he showed that one-tenth of the people of Great Britain, four and a half millions of British citizens, a fraction which included between a fifth and a quarter of all the children of Britain, received an income of 10s. or less per head per week, and obtained a diet that was deficient in Calories and grossly deficient in all minerals and vitamins; that half of the people of Great Britain were obtaining a diet that was more or less deficient, and that it was not until the income per head was £1 per week or over that the diet obtained was adequate in all respects. The work produced a sensation, and there were some who, with some degree of justice, pointed out that the dietetic deficiency was partly due to ignorance and fecklessness, though about that time various surveys showed that the cost of an adequate diet, as suggested by the British Medical Association, skilfully compiled and bought under favourable conditions, varied from 6s. to 9s. 10d. per week. McGonigle and others showed also that the circumstances of the poor are such in respect of the prior claims of rent, light, heat and inescapable commitments that food inevitably comes last in the budget. What is left is spent on food! The same Dr. McGonigle had just previously made a remarkable contribution when he showed that the great rehousing schemes then in progress, which the nation justifiably regarded with some pride, could react most unfavourably on the alleged beneficiaries, and that in the town, Stockton-on-Tees, of which he was the medical officer of health, the poor in their beautiful new housing estate were definitely and demonstrably worse in health than they had been in their slums, because they had less to spend on food. Their general and specific death rates were higher in their new quarters.

In recent years innumerable studies have been made among various groups and sections of the people of Great Britain, of the effects of supplementing the diets of children and adults, of the adequacy of actual diets as compared to standard diets, of the clinical and biochemical evidence of general and specific deficiencies of vitamins and minerals, and of the cost of actual and of adequate diets. These studies have, in the main, supported the general conclusions of Sir John Orr.

This spate of investigations of the relation of poverty and deficiency disease in Great Britain had its counterpart in the United States of America, and, on a smaller scale, in Australia. The situation in the United States of America was summed up, two years ago, by the chief of the Public Health Service, Dr. Thomas Parran, in the following words:

> Your children and mine, the college-entrance records show, are on the average taller than their parents and physically better specimens; because, among other reasons, science has taught us how to feed them better. I hope their mental equipment also is proportionately better, but of that I have no present proof. But step by step, as the income level goes down among millions of children and youths whom this country needs for the arts of peace and the defenses of war, you will find, because of underfeeding and improper feeding, stunted growth, imperfections in development, subnormal height, weight, and muscular tone, and a *proved* lack of mental alertness. And I speak only of the children, because malnutrition does irremedial damage to them. There also are millions of adults half fed and almost wholly physical failures.

Here, also, though we did not have the dreadful depressed areas of Great Britain or the hoboes on the highways of America, we had a depression. We also had and have our tens of thousands "on the dole", our tens, or hundreds, of thousands of children who, because of poverty, do not and cannot get the essentials of health. We also have a large proportion of our families either outcast or under the continuous threat of unemployment with its consequent physical and mental disease and degradation. Australian investigations also show that the children of the poor are smaller than those of the more fortunate (Figures II and III), and investigations among the poor in Melbourne city show that the fourth and later

children are, after the first six months, distinctly smaller than first children (Figures IV and V).

In Australia we have had, owing to our machinery of wage fixation by legal processes, more evidence than in other countries of the real and the monetary "cost of living". Unsatisfactory though that evidence is, we can be sure at least that the cost of providing reasonably adequate food, clothing and shelter for a child is at least 12s. per week. We can compare that figure with the 2s. 6d. per week which was allowed for tens of thousands of children "on the dole" during the depression, with the various allowances paid for orphans and children boarded out, and with the 5s. per week now to be paid, as endowment, for hundreds of thousands of children belonging to large families. At the same time, we know that the physical essentials themselves, as distinct from their cost, exist in ensured superabundance (Figure VI).

With regard to the mental or psychological factors affecting health, our attitude towards a person depends mainly on his performances, his ability and character, and despite the existence of even gross physical deformities or suffering we should still regard a human being with approval if his performances were of great merit and his mind active, his character warm. We would think of him as well in spite of physical handicaps.

In the ordinary field of medical practice, as I have stated, one of the striking developments of recent times is the recognition of the influence of psychological factors

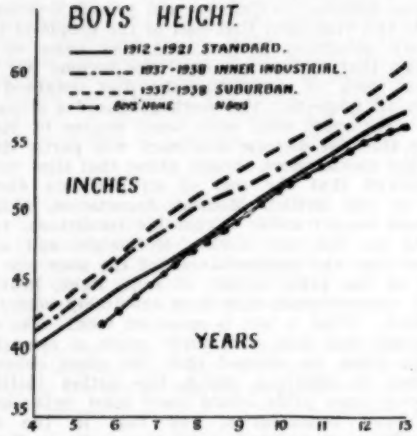


FIGURE II.

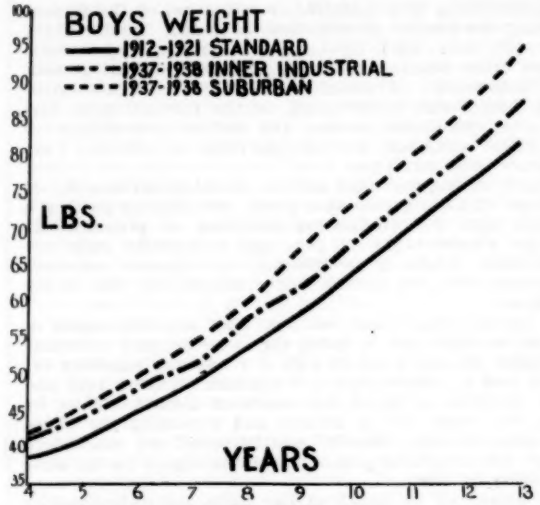


FIGURE III.

Average height and weight of boys attending schools in inner industrial and suburban areas, respectively, of Greater Melbourne in 1937-1938, compared with the averages of all Victorian schoolboys for the period 1912-1921. (Compiled from the report of the Minister of Public Instruction, Victoria, 1937-1938.) The dotted line on Figure II represents the average height of the 91 boys in a Victorian boys' home in 1940. Their average weight, though not shown on Figure III, was correspondingly inferior.

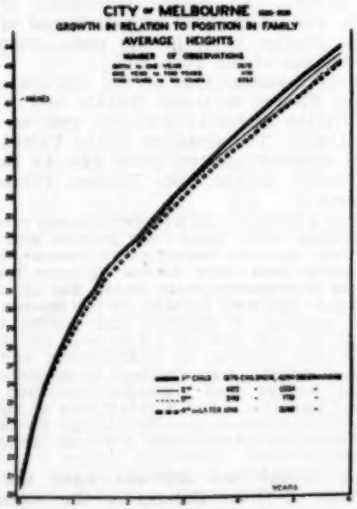


FIGURE IV.

Average height of infants grouped according to position in family. (Constructed from records of the health centres in the city of Melbourne, 1935-1939.)

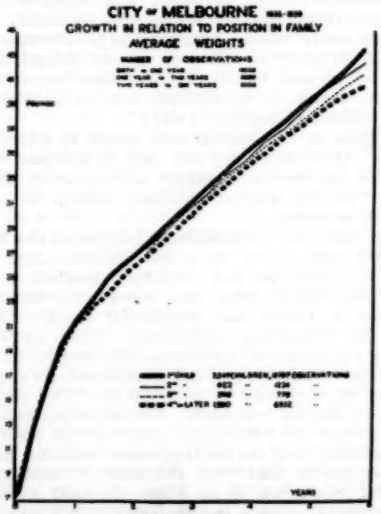


FIGURE V.

Average weight of infants grouped according to position in family. (Constructed from records of the health centres in the city of Melbourne, 1935-1939.)

in ill health. Apart from mental disease and alienation as such, there are the psychoses and the neuroses, there are the anxiety states with their related somatic disturbances, and in the primarily physical disabilities there are the secondary psychological disturbances. Psychology is now recognized as an established science and regarded as essential in the medical course. The term mental hygiene has become familiar, and councils of mental hygiene exist in an affiliated network throughout the English-speaking races.

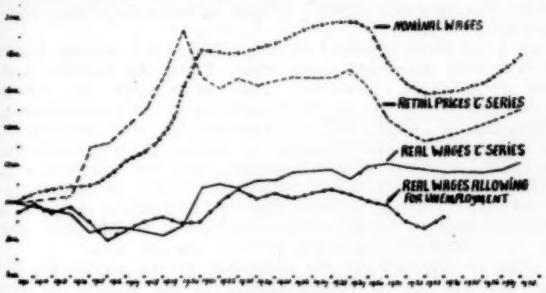


FIGURE VI.

Wage "fixation", showing the range of variation of wages and retail prices in Australia from 1911 to 1938, the year 1911 being taken in each case as base (= 1,000). It will be observed that "real wages" have risen relatively little over the whole period and that "real wages allowing for unemployment" were lower during 1931-1933 than during 1911-1913. Yet during the whole period there has been a steady and progressive increase in potential productivity in almost every phase of production.

Many years ago I was fortunate enough to be asked to distribute the diplomas to the graduates at a kindergarten training college. I read Montesori's work on kindergartens and was introduced to the kindergarten movement generally. I was immensely interested in the possibilities of what I read and saw, and developed a further interest in education generally. As a result I am convinced that mental hygiene construed as applied psychology is destined to be at least as fruitful as the application of applied physiology and dietetics has proved to be in child welfare work and hygiene generally. Already there are well-established nursery school kindergarten organizations demonstrating their beneficent influence in all our communities.

Nursery schools and kindergartens, says Sand, enable children even of two or three years to acquire independence and a spirit of responsibility that do not usually manifest themselves until the age of eight or ten years. He writes as follows of the children who attended the Margaret McMillan Nursery School at Deptford:

> Despite the fact that the children come from very poor homes, at seven years they are alert, sociable, eager for life and fresh experience. They read and write fluently. They speak good English and a little French. They come to school joyfully—it is a punishment for them to be kept away.

This evidence of happiness is one of the surest signs of health and reflects the new conception of the possibilities of education, which is one of the few encouraging signs of our times. Education as a whole is ready and beginning to be transformed. Formerly all that was expected from a teacher was the knowledge of the subject to be taught. Today he must also have a knowledge of the child, its needs and its potentialities. Formerly the child was expected at any cost to absorb certain educational ideas and moral rules. The new point of view regards the school as a place of opportunity where the child shall be encouraged to develop his innate faculties and special aptitudes in harmony in a social environment. His indispensable self-respect—"the precious self" (McDougall)—depends on the respect of others, which is evoked by achievement. This dependence of self-respect on appreciation was amusingly illustrated (Figures VII and VIII) in *Reynolds News* in comment upon magisterial strictures on the keeping of dogs by recipients of the dole in England. It is impossible for me now, were I capable, to develop this theme more fully. Let it suffice to say that the health of an individual as I have defined it—his quality—depends in the main upon his being able to use his developed faculties in a socially useful manner, and this depends primarily on his full education and on the similar education of his fellows. Let me here remind you of the striking results claimed for "occupation-therapy" in mental disorder and in other fields. What will cure will surely prevent! When one thinks of the large proportion of our fellow citizens who are outcast, unemployed or unemployable, or who are forced into uncongenial labour—round pegs in square holes and *vice versa*—and who by unhappy and harsh environment in their early years have been thwarted and mentally deformed, one realizes the possibilities of applied psychology and the urgent need of thorough-going educational reform. One also realizes how great is the mental as well as the physical damage resulting from unemployment and the fear thereof, on which Dr. Mailer is to speak tonight.

The State has one opinion about man—

FIGURE VII.

His dog has another.

FIGURE VIII.

"They should not keep dogs." (Reproduced from *Reynolds News*, 1937.)

I ask now your concurrence with the assertion that health is not mainly a medical problem with which doctors can deal. It depends mainly on economics and education. We can only assess and advise. Our impotence is excusable—but advise we certainly should. I have studied, so far as I have been able, the better known schemes of social reform. I mention the fact because that study has emphasized that all this want has persisted and this insecurity has grown during a period when the real wealth and the potential wealth of the communities affected have been increasing hand over hand. The idea of over-production, new in the last twenty years, has now become familiar everywhere, and it is this absurd paradox of poverty and increasing insecurity in the midst of plenty and increasing potential security that has made the situation intolerable. The dreadful cruelty of this tantalization demands that we, secure, privileged and trusted, who are in a position to estimate and assess the influence of poverty, anxiety and insecurity upon health, should insist on a solution of the paradox.

It is not necessary that we should embrace any particular brand of social reform. Having, as I say, studied them all as far as I can, I naturally have rather well-defined views, which I do not propose to inflict on you; but approaching the matter from the medical angle and with the assurance that certain necessary steps are physically possible and urgently necessary, I do ask my colleagues to use their influence to press for a new order now. Whatever the shape of that order, it must, I suggest, be based on the following principles: (i) the assurance to every child of the essentials of health; (ii) the best education possible; (iii) economic security—the assurance of employment under reasonable conditions and adequate sustenance for all who are unable to work or who are not required.

The medical profession has already, let me remind you, urged upon the Commonwealth Government the necessity of subsidizing the families of patients suffering from early tuberculosis, and tuberculosis, though an outstanding example, is the only one of the hundred conditions in which families of wage-earners must, in the interest of national health, be provided with sustenance.

It may be objected that we are at war and that nothing can be done now. Let me remind you of the years of so-called peace preceding the actual outbreak—years of such social and political perplexity, years of such division and despair, that the outbreak of war was almost welcomed. Let me remind you that it was mainly the undertaking of rearmament in the major countries which lifted us all out of the depression of ten years ago, and in the early days of the present war—when it was still "phoney"—our politicians were warning us of the unemployment and depressions which were to be anticipated if peace should break out again. Now all are agreed that after the war there is to be a "new order". We should have pressed for it before the war. After the war it will be too late. Now, during the war, we know in our hearts that there is nothing which would so strengthen and unite our people as a clear statement of what we are fighting for. We know what we are fighting against; but what are we fighting for? The principles I have outlined as emerging from a medical and humane consideration of pre-war society must surely be the basis of a new order which could unite us and supply the need for a positive aim, and encourage the vanquished and suffering peoples of Europe. They are the basis of real democracy. They are the proof of respect for human life and for the individual. Everybody wants them. They are essential points of the children's charters and of declarations of the rights of man which find universal acceptance. That we should supply the essentials of health and the fullest educational opportunities to all children and guarantee economic security as already defined—these aims are, we know, within the physical capacity of the community. They were within that capacity before the war and they are now. Their implementation will help us greatly to win the war, and it is our only hope of winning the peace.

SOME PROBLEMS OF MEDICAL SOCIOLOGY.[1]

By RAMSAY MAILER,
Melbourne.

FOR the last seven years, as a retired member of the medical profession, I have given some thought and study to various social problems. Tonight I wish to speak of the conclusions at which I have arrived. With some of these you may not agree. I hope at least to arouse your interest.

As I see them, medical social problems are largely interwoven with economic conditions. I will go further, and say that these problems, like practically all social problems, are fundamentally economic. Unemployment, primarily at least, is not regarded as the concern of medical men; but the evils it leaves in its train are definitely medical social problems, and my contention is that not only are these evils—the results of unemployment—the concern of the medical profession, but in a similar degree the economic conditions which give rise to the unemployment itself are its concern also.

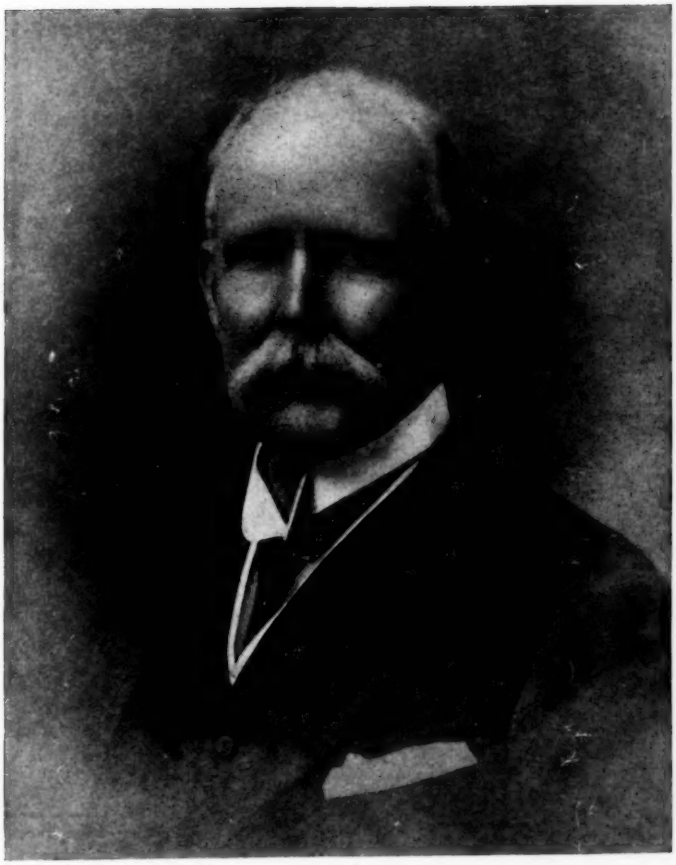
Rightly regarded as the custodian of the public health, the medical profession is looked to for a lead in the solution of these evils; but is it completely fulfilling its duty till it has made a full study of the economic system that permits them to exist? Is it not possible that, after intelligent investigation, the profession might be convinced that our present system was altogether wrong, or at least capable of improvement? Did it arrive at such a conclusion, it would then be in a position with united voice adequately and with power to express such opinion in our houses of legislature, either through its own members, or by men prepared to support its views and thereby give a lead to the people which I believe they would not be slow to follow.

The social problems I would speak of tonight are those circling round and in the first instance almost certainly due to unemployment. A law-abiding citizen has, or should have, I believe, certain just rights. The all-important of these, in my opinion, is the right to employment, to continuity of employment, and to employment at a wage that will ensure him the wherewithal to provide for himself, his wife and his family a healthy home in a healthy setting, a sufficiency of nutritious food, and an adequate supply of suitable clothing. Is this too much to expect for a law-abiding citizen in a country such as our own? Consider its practically unlimited resourses, its power to produce and manufacture for all an abundance of everything man requires for his well-being, and with a multitude of national reproductive works—works that would add enormously to the wealth of the nation—waiting only to be brought into being. Yet in the worst years of the recent financial depression, nearly 40,000 of our fellows were denied these rights, and through no fault of their own were forced to accept the dole or to work for sustenance, at a pittance barely sufficient to keep body and soul together. Needless to say, bad housing, bad clothing, unsuitable feeding and other evils soon followed, with disastrous results to the mental, moral and bodily health of the families concerned.

Housing.

Is there any medical man among us today who is happy when he reflects on the shocking conditions of housing that have been forced upon so many of our citizens, especially since the years of depression set in? I feel certain few medical men are unaware of these conditions. If there are still some such, I would ask them to get into touch with their colleagues, whose work and duty take them into these congested areas, and learn the truth. To the general practitioners who labour willingly there with little reward I pay a humble tribute of appreciation. I do not wish you to accept any description of mine regarding such homes. I prefer to quote a short paragraph

[1] Read at a meeting of the Victorian Branch of the British Medical Association on June 4, 1941.



F. Antill Pockley

UNIV. OF MICH.

from one of a series of articles by a special reporter of *The Argus*, published some few years ago, and I am convinced from personal experience that the position has not only not improved, but has deteriorated in the meantime. The reporter writes as follows:

In Collingwood I found a terrace of houses each of two rooms and a lean-to kitchen, each with a frontage of 10 feet to a street 15 feet wide. For six months in the year not a ray of sunshine may enter one of these houses. Dirt, damp and darkness, the three arch-enemies of health, are all there. In Fitzroy there are houses of two rooms with back yards six feet square, so unutterably filthy that one must fight against the stench to enter them, yet large families live in such places and take in lodgers to help to pay the rent. Collingwood has 400 houses without a bathroom, and there are probably more in Fitzroy and almost as many in North Melbourne, Carlton, Richmond and Port Melbourne. In a four-roomed house in Fitzroy were found to be a father, mother and child, a married daughter and her husband, a widow with five children, another woman with a baby, and an old-age pensioner. A lane in Carlton leads to a cross-lane filthier than the first, with garbage lying in pools of stagnant water. Stables and outhouses are on one side, on the other a terrace of cottages with front doors opening directly on the filth. Frontages are 11 feet 6 inches, rather better than those of many similar houses with frontages of 10 feet and less. Even eight-feet frontages are not difficult to find. One can imagine the hopelessness, the misery and utter despair of the men and women compelled to pass their lives in such circumstances.

From my own knowledge I say that is no overpainted picture. In these areas are hundreds of acres, the buildings on which should be completely wiped out and the land reclaimed and completely replanned if real slum abolition is ever to be brought about.

The apparent policy of the Housing Commission in building large numbers of houses in industrial suburbs which are already overcrowded, such as Richmond and Brunswick, is in my opinion only providing potential future slums. A mean home alone does not create a slum; the environment in which it is set often plays a greater part in slum creation, and when large numbers of fairly decent cottages are huddled and crowded together in an unhealthy environment with little or no open space for play and recreation, then almost certainly such homes—notwithstanding their promise when first erected—in from ten to twenty years will have assumed a slum aspect and in fact become slums. A case in point is the erection by the Commission of 139 tenements, many semi-detached, at Richmond on an area about 15 acres in extent in what is probably lower in situation than any other portion of the city. So low is this area that in the winter months of last year a huge artificial lake formed in its centre, and a considerable sum had to be spent on drainage before building could proceed. Although it was acquired at a cost of £28,000, it has not been found possible to provide even a quarter of an acre of real playground space; consequently, as in existing slum areas, the streets and by-lanes must be the playground of the children, and the environment is that of the starting-price bookmaker and his touts as well as of those who indulge in other vices.

The cost of each of these tenements including the land must be in the region of £1,100, and the number of homes when streets are provided for cannot be much, if any, below ten to the acre. Surely for so large an expenditure something more effectual in rebuilding should be expected than potential future slums! The argument that the cost of travelling necessitates this crowding will not hold. Eventually slum houses must be replaced by garden cities in the wide open spaces of the outer healthy suburbs. The railways are the property of the people, and the people must insist that the fares be in accordance with what the people can pay. I believe that in New York one may travel forty miles for a nickel, a sum equal to five halfpence of our money.

Food.

Before the outbreak of war the want not only of nutritious food but of food of any kind was a very real problem and in many cases still is. Men receiving the dole and sustenance, after paying rent for their hovels, have little left with which to provide suitable food or food of any kind for their children. As a result malnutrition was and still is rampant, and today there are cases of real semi-starvation. Deaconesses and other social workers relate many distressing stories of the lack of food in homes and of the pain caused many decent parents through inability, except by theft, to supply their children's need.

One sometimes hears it said by ignorant people that they have no time for the churches, and they ask what good the churches do. Had such people seen, as I have seen over many years, the work carried on among the poor by the churches of all denominations, they would hang their heads in shame for such a remark. By the supplying of food and clothing, of fuel, bedding and blankets, and by the kindly and sympathetic help given by their missioners, deaconesses and sisters, they have saved us from chaos.

On first acquaintance with children of school-leaving age in the congested areas I was struck by the fact that in most cases they were not so well educated as children of the same age attending the State schools in healthier suburbs, and this though the schools and teachers are similar in both cases. Of course it did not take long to find the answer, the better nutrition of the one class making all the difference. Since the Oslo meal has been given to about 60 children attending Collingwood State schools, teachers report a great improvement in the ability of these children to learn.

Clothing.

The want of suitable clothing is another evil following in the wake of unemployment, and especially when associated with want of food it gives rise to medical problems.

I can think of no sadder sight than a group of children with bare legs and bare feet, their only clothing perhaps a shirt and a ragged pair of pants on a cold wet winter's night, cowering under the veranda of some shop with pale pinched faces and their eyes glued hungrily on the eatables displayed in the shop window. Nor are such sights confined to boys; girls may be found in like circumstances. This is surely a very potent soil for the development of rheumatism, tuberculosis, rickets and other diseases!

Education.

Before the outbreak of war, when parents were receiving the dole, immediately a girl or boy reached the school-leaving age she or he was at once sent to work, provided a job of any kind was available. In certain cases permits could be obtained for a child to begin work at twelve years of age. Such jobs were often most unsuitable for the children and were generally only of a temporary nature; but they meant the end of any further education as far as the boy or girl was concerned, and when it suited the employer because he had to pay an increased award rate or for some other cause, the child was cast aside to join the ever-increasing army of unwanted unskilled labourers. I am certain that in no circumstances should a child be allowed to leave school before he reaches the full age of sixteen years, the last two at least to be spent in a technical or high school.

Discussion.

I would say that unemployment is the main cause of poverty, misery, distress and crime, of bad housing, bad feeding, bad clothing, of most of our moral, mental and bodily ill health, and that its incidence is disastrous to the men themselves, to their wives and their children, and to the nation as a whole. It is disastrous to the men in forcing them to take the dole or work for sustenance, thus destroying their morale and spirit of independence, breaking both their spirits and their bodies, and leaving to them in many cases as their only solace the hotel bar and the starting-price bookmaker.

Unemployment is disastrous to the wives, not only by compelling them to bring up their families in shocking circumstances, but in addition, such is their dire poverty, by compelling them to seek work as charwomen (to the neglect of their children) in order to earn a few extra shillings and so eke out their slender resources.

Unemployment is disastrous to the children, many of whom have their constitutions sapped and undermined even before birth, and after birth are handicapped in every possible way in their fight for a healthy life. From the moment they can take notice, such children are surrounded by everything that is evil, vicious and vile. Every child born should be an asset to the community and should have the right to develop morally and bodily in a healthy environment. As things are, many have no such chance and must almost inevitably become a menace, moral or physical.

On the welfare of the nation as a whole unemployment is likewise calamitous in its results. I think I am right when I say that nearly £40,000,000 have been spent in this State alone on dole and sustenance in the years of depression, and what have we to show for the expenditure of this colossal sum? As far as I know, nothing, beyond the partly completed Yarra Boulevard and the bent heads, broken bodies and crushed spirits of many thousands of our fellow men. Again, to the account of unemployment must be placed in very large measure the necessity for the huge new hospitals everywhere threatening to dominate the skyline of our city. The cost of construction and upkeep will in the future certainly prove a very heavy burden on taxpayers. A study of the figures showing the increase from year to year in the amount necessary to maintain the social services of the State is illuminating—and staggering.

I am neither economist nor financier; but I cannot and do not believe there was any need for the wholesale unemployment that fell like a pall on our country in the years of financial depression. I am not unmindful of the fact that at that time the best advice so-called orthodox economists could give to thousands of men, women and children on the verge of starvation was to pull in their belts, and to hundreds of strugglers on the land to produce less. If the system of sound finance which functions was responsible for this catastrophic state of affairs, surely the system is due for a radical overhaul. Further, I am not unmindful of the fact that just recently a leading public man, an accountant, and for many years occupying the position of Premier of New South Wales (I think I am right when I say it was Sir Bertram Stevens) recently said that creation of credit by the Commonwealth Bank was certainly not inflation, but perfectly sound finance, until every able-bodied man was engaged in reproductive work. A statement like that and from such a source causes one furiously to think, and if it is true, what an immensity of suffering would have been saved had this principle been brought into practice! Again, I am not unmindful of the fact that chairmen of large financial concerns operating under our present monetary system go out of their way in their addresses at annual meetings to ridicule, belittle and misrepresent those who suggest inquiry into the whole question. Such an attitude on their part suggests to my mind a certain fear that investigation may be troublesome, and their attitude only hastens the day of study and research.

All over Britain lovers of their country are devoting time and thought to this question. They realize that in the planning for any better social order the reason of failure of the existing one must first be found and rectified.

As perhaps most of you know, a remarkable document dealing with this question was issued in England in December, 1940, signed by the two Anglican archbishops, by Cardinal Himsley and by the Moderator of the Free Church Council. It is said that the document is not regarded with particular favour by certain people in high places; but behind it are the vast majority of earnest and thoughtful persons, who are convinced that things must be radically changed. It is useless to kick against this change, such people say, for it must come. Following the issue of this document the Archbishop of York called a conference at Malvern early this year. It was attended by many of the best known men in the educational world of the Old Country. The report of this conference has recently been issued. It condemns fearlessly the present industrial order and exposes mercilessly the present monetary system. It has had far-reaching results; mass meetings have been held in many leading centres and large study groups are being formed throughout the country.

For the guidance of its members, could not such an important and influential body as the British Medical Association follow the lead of the Church in this matter? It could set up a committee of inquiry from its own members to decide such questions as: Why in a country like our own are large numbers of men denied employment? What are the causes of periods of depression? Is the present monetary system at fault? Would any other suggested system or systems function more fairly and more equitably for the majority of the people and for the welfare of the nation as a whole? Until the British Medical Association takes action in some such direction it will not in my opinion have given that lead to public thought that is expected from such an important organization, and surely it will not have completely fulfilled its duty to the nation.

Reviews.

MALIGNANT DISEASE AND RADIUM TREATMENT.

FOR some years practising radiotherapists and those vitally interested in the application of radium in the treatment of cancer have awaited a book of the calibre and scope of Cade's excellent publication "Malignant Disease and its Treatment by Radium".[1] Mr. Stanford Cade is to be heartily congratulated on having compiled so successfully such a full account of the natural history of malignant disease and its treatment in every site in the body, as well as the latest work on the physics and biological effects of radiation.

One point that will commend the book to the specialist is that throughout due emphasis is laid on the need for the accurate estimation of radium dosage in terms of the units of energy (expressed in roentgens) supplied to the tissues; and furthermore, in the sections dealing with treatment of various types of cancer, actual doses in *r* units used in practice are given. The author has expressed the hope that "the book may in a small measure contribute to a more exact and less empirical use of radium". We have no doubt that it will do much towards this end.

The book is divided into three parts. The first deals with the physics of radium. This is covered in a comprehensive manner and the author includes the latest work on the practical measurement of γ-ray dosage in radium teletherapy, surface and interstitial methods and radium plaque therapy. This highly specialized part of the work has been written by well-known physicists.

It is pleasing to see such a large section as the second part devoted to the biological effects of radiation, including chapters on radiosensitivity, the mode of action of radiation, and the effects of radium on normal tissues and malignant tumours, with copious references. The dangers of radiotherapy are emphasized, a noteworthy statement made in this connexion being that radium necrosis "is neither inevitable nor is it of any therapeutic value".

The third part, covering nearly a thousand pages, is a full account of malignant disease in various anatomical sites, including the natural history of the disease, diagnosis, choice of the method of treatment and the technique of radium therapy employed. An excellent section on the principles underlying the radium treatment of cancer is included in the opening chapter of this part.

The sections on the choice of the method of treatment will be found particularly valuable. The value of surgery, endothermy, deep X-ray therapy and various types of radium therapy is considered. With certain details of radium technique that are included many naturally will not agree.

Chapters on intrathoracic tumours, malignant disease of the œsophagus and stomach, and intracranial tumours have been written by collaborators.

There are 623 illustrations and numerous references to the literature. The book is excellently produced, and no doubt will remain the best reference book for this type of work for some time to come.

[1] "Malignant Disease and its Treatment by Radium", by S. Cade, F.R.C.S.; 1940. Bristol: John Wright and Sons Limited. Super royal 8vo, pp. 1,289, with 623 illustrations, many in colour. Price: 75s. net.

The Medical Journal of Australia

SATURDAY, AUGUST 9, 1941.

All articles submitted for publication in this journal should be typed with double or treble spacing. Carbon copies should not be sent. Authors are requested to avoid the use of abbreviations and not to underline either words or phrases.

References to articles and books should be carefully checked. In a reference the following information should be given without abbreviation: Initials of author, surname of author, full title of article, name of journal, volume, full date (month, day and year), number of the first page of the article. If a reference is made to an abstract of a paper, the name of the original journal, together with that of the journal in which the abstract has appeared, should be given with full date in each instance.

Authors who are not accustomed to preparing drawings or photographic prints for reproduction are invited to seek the advice of the Editor.

MEDICAL SOCIOLOGY: THE NEED FOR ACTION.

THE two papers read at a recent meeting of the Victorian Branch of the British Medical Association by Dr. John Dale and Dr. Ramsay Mailer and the discussion that followed their presentation are timely and significant. They are timely because discussions of this kind are necessary now more than ever before; they are significant because they reflect the thought that is given to the problems of medical sociology by numbers of medical practitioners. This number is larger than many people believe; in fact, every medical man and woman who in the course of ministrations to the sick public gain an insight into present-day conditions of life (there are very few who will not be included in this category) must have given more than passing thought to the social problems of today, for they crop up on every hand. But, as has been well said in relation to this subject, "what is everybody's business is nobody's business", and so the numbers of those who make an effort to face the issues are not great. It is not to be expected that all those who are alive to the needs of the present situation will trace all our troubles to the same causes, or finding common causes will give them the same relative importance. This will not matter very much. It is the will to do something that matters. To win recruits to the cause should be the present aim; common ground for action will be found easily enough later on. If the present therefore smacks somewhat of previous discussions in these columns, there need be no apology.

In the Victorian discussion the problem was described as being essentially economic. That this is so must be admitted, but, as the Victorian speakers insist, this does not relieve medicine of any responsibility in regard to it. Medical men and women cannot wash their hands of the whole matter and say that they will wait until the economic system is changed and that then when everyone in the community is employed at a reasonable wage the problems of health and medical attendance will be easily solved. On many occasions we have insisted that those who practise preventive medicine must be concerned with the health, the general welfare and the happiness of the people. Health, as Dr. Dale points out, is a positive and not a negative state; it is a state of ease, not of dis-ease. If a man cannot find employment he will not be able to provide food for himself, his wife and his family; he and they will suffer bodily privation and mental anguish; he will be in a state of dis-ease, and medicine as custodian of man's welfare must try to do something about it. If the houses available to members of the community are not in healthy places, are not roomy and have not enough light and air, man will soon be in dis-ease, and medicine as the guardian of man's health must try to do something about it. If, in the midst of plenty, good food and clothes are not within the reach or the means of those who are in work, workers will quickly be in dis-ease, and medicine, which is charged with their care and should prevent them from being ill, must try to do something about it. As Dr. Mailer suggests, the medical profession is not completely fulfilling its duty until it has made a full study of the economic system that allows social evils to exist. This is logical if, as we must, we accept the broad definition of preventive medicine that is stated above. Obviously, if the social evils of today are the result of slavish adherence to the present economic system (and who will have the temerity to deny that they are?) society will have to readjust its sense of values and by a more equable redistribution of the burden inherent in the system do away with the evils. If this cannot be done under the present system then the system must be changed. Society has to make up a good deal of leeway. In the past we have shown that society cannot be held blameless in regard to much of the crime for which it inflicts punishment. In the same way it cannot evade responsibility for the plight of at least some of those who are unemployable or for the poor value that others bring in the labour market. While it is true that there will always be subnormal people who seek employment, it must be granted that the correction of social evils would improve the efficiency of many who at present are not regarded as particularly valuable in the field of industry. Thus we see that the views of Dr. Dale and Dr. Mailer are complementary, the one to the other. Dr. Mailer insists that we should study the economic system so that it may be either improved or changed and that the voice of medicine should be raised towards this end. Dr. Dale holds that medical folk can only assess and advise. This is true of the greater number of people in the community. The members of the legislature alone can alter the laws of the country on which the present fabric of society rests. It is the will of the people, in other words public opinion, that appoints members to Parliament. The will of the people can demand any change that it desires. Medical men and women, in common with other members of the community, perhaps more than most people, can help to mould public opinion. On this ground apathy to the present state of affairs is not only inexcusable but blameworthy.

Dr. Dale suggests that any new order that arises should be based on three principles: "(*a*) the assurance to every child of the essentials of health; (*b*) the best education possible; (*c*) economic security—the assurance of employment under reasonable conditions and adequate sustenance for all who are unable to work or who are not required." Included under these headings are the things for which devotees of preventive medicine have long been striving. If every child is to be assured of the essentials of health

the aims of preventive medicine must be carried into effect. This means among other things that medical practitioners individually and organized medicine as a whole must take far more interest in keeping people well than in curing them when they are sick. Until this attitude prevails there will be no radical change. Already there is a large body of medical practitioners who deplore the unfortunate condition of affairs which allows them to make respectable incomes out of the bodily and mental ailments of the people around them; but we have yet to see a widespread indication that the medical profession is more interested in what it gives to the community than in what it receives from it. That this might apply with more force to people in other walks of life is beside the point. In regard to Dr. Dale's second point, education, it must be realized that this includes not only instruction in "the three R's" and other subjects of a school education; it is not complete even when knowledge on matters connected with health has been acquired; it must include teaching on how to live. This opens up a big subject and the question naturally arises as to who will do the teaching. Knowledge of how to live is acquired oftener than not after long and sometimes painful experience, and there are many medical practitioners who themselves are in need of instruction. They see in the lives of their patients, if they will take notice, the results of lack of this knowledge. If they study the lives of their patients and try to put them on the road of full achievement, they may themselves learn more of the art. Dr. Dale's third point is more economic than medical, but it has its medical side, for it includes amongst other things all that comes under the headings of industrial hygiene, mental hygiene and nutrition.

The upshot of the matter at present is that medical practitioners as a body must study social problems and they must make their voices heard among those who clamour for the removal of disabilities and evils. Dr. Mailer's plea for study by members of the medical profession could be met if our suggestion of last March was adopted and a "special group" was formed within the British Medical Association in Australia for the study of medical sociology. Apart from this and a general planning for the future, opportunities of showing good intentions will arise. As we have pointed out before, such an opportunity awaits the medical profession at present. The Branches of the British Medical Association are considering a scheme for a general medical service that will be discussed at the next meeting of the Federal Council. In this scheme the medical profession can, if it will, make it clear that its service to the community must cover every aspect of preventive medicine. The scheme must be no half-hearted affair that will deal with only part of the problem, and it must be clear that its primary object is to benefit the community, the whole community and nothing but the community.

Current Comment.

BOILS.

THE many different forms of treatment meted out to sufferers from boils are a witness to their frequent futility. Most clinicians make an incision into a boil when pus has formed, and dressings of different kinds are applied. A great deal of care is generally taken to prevent constant soiling of the surrounding skin with the discharge and some internal medication is used. Yeast is a favourite remedy, and manganese is often exhibited. Vaccines of different kinds are injected, and attention is focused on the diet, the food restrictions varying with the ideas of the medical attendant. The careful clinician always examines the urine of a patient with boils, for boils in a diabetic are more serious than in one not so afflicted. X-ray treatment has been used, as well as suction and the application of heat in various forms. In a leading article on the subject of boils appearing in *The Lancet* of December 14, 1940, Crocker is stated to have been right when he wrote: "Although internal remedies are to a certain extent useful, early local disinfection is the most efficient means of preventing constant recurrence, and if the circumstances of the patient allow of its being efficiently carried out the boils will soon cease to form." The article concluded with the statement that if boils recurred after careful local treatment, it was then time enough to try specific remedies. The final thrust was that choice of these would probably be governed by fancy and the results by fortune.

A general surgeon, in the person of Harold Dodd, has taken up this question and has advocated a form of treatment which he has been using with success for some years.[1] He refers to the leading article of *The Lancet* just quoted, and states that the last two sentences are a confession of failure. The first thing on which Dodd insists is that the patient shall take a liberal and balanced diet of well-cooked fresh fruits, vegetables and meat. Cakes, sweets, chocolates, jams and tinned foods are eliminated as far as possible from the menu—patients do better on a "low-carbohydrate diet". While boils are actually present the patient is made to drink large quantities of fluid; at least six or seven pints a day are needed so that the patient will pass a hundred ounces of urine a day. The patient is put to bed and is given barbiturates every night to ensure sleep. Septic foci are sought in all their possible hiding places, tonsils, teeth, digestive tract, and so on, being investigated. When debility seems to be a main factor a blood count is made. This sometimes reveals anæmia, and in these circumstances if the hæmoglobin value is below 85% a blood transfusion is given. Compresses saturated with 12% sodium sulphate solution are applied locally, a piece of jaconet covers the compress and then a large piece of cotton wool is added; heat is supplied by a rubber hot-water bottle or an electrically heated pad. If the limb is affected it is splinted, special attention being paid to the fixation of fingers. If the boils (or carbuncles) are on the back of the neck immobilization is secured by fixation on a back splint with a foot-piece. The foot-piece rests on the head and the leg-piece lies behind, the head, neck and scapulæ being secured by bands round the forehead, neck and chest. Patients with boils on the back are nursed face downwards. A large dressing is put on perineal boils and the bowels are not allowed to act for one week.

Dodd's method of treatment is the logical outcome of his view that boils occur when the patient's vital sources are insufficient to resist such organisms as staphylococci, which are always present. In the case of domestic, industrial and professional patients, the cause, he states, is often to be found in defective diet, exhaustion or septic foci. Dodd's most significant paragraph may be quoted:

> A staphylococcal infection stimulates a gross local inflammatory reaction in the skin and subcuticular tissues. This is characterized by much œdema, induration and thrombosis of the adjacent veins, capillaries and lymphatics, and produces a large brawny, cyanosed swelling. The blood-supply is deficient in the central area and hence the sloughing. The staphylococcus exerts a lytic reaction on the skin and subcutaneous tissue, so that drainage is self-made. This course is ideal, spread elsewhere is arrested and drainage is assured. Treatment is obvious: leave the lesions alone and relieve the pain by rest and sedatives.

Many clinicians will possibly look on this treatment as too drastic. The whole argument, however, is logical, and

[1] *The Lancet*, April 26, 1941.

when Dodd states that for more than ten years he has not opened a boil or a carbuncle surgically, the method must be looked on as successful. The rest and the splinting are possibly the most important points in the treatment, and it is perhaps useful to point out that absolute rest by the application of plaster to war wounds is attended by success hitherto not obtained. Rest will overcome the patient's exhaustion, and the other measures for increasing his resistance are sound. The use of blood transfusion to relieve the attendant anæmia is of interest, and also important in view of the part that the added blood may take in the acquisition by the patient of immunity to the causative organism. Dodd's article should be studied with care by all who may have to treat patients with boils.

THE ADMINISTRATION OF IRON TO BLOOD DONORS.

In these days, when numbers of men and women, actuated by love of country and a desire to serve, are giving their blood to the Red Cross Blood Transfusion Services, it is important that knowledge in regard to the regeneration of hæmoglobin should be as complete as possible. All who have to do with blood transfusion services will therefore be interested in a recent communication by A. C. Santy on the response of blood donors to iron.[1] This author opens his article with the statement that the frequent giving of blood inevitably causes anæmia in the donor. Snapper, Liu, Chung and Yu have shown that this anæmia is of the hypochromic microcytic type; they observed that it responded readily to iron therapy and that the regeneration of hæmoglobin was uncertain in anæmic donors who did not receive iron. Because the routine administration of iron to donors is not general, Santy has investigated iron therapy as applied to repeated blood loss by the giving of blood. In his investigation he alternately gave iron to and withheld it from a group of professional blood donors. The iron used was exsiccated ferrous sulphate, and it was given in three-grain tablets; as a rule four tablets a day were given. Santy found that hæmoglobin regeneration after the withdrawal of blood took place eight times more rapidly when iron was given than when it was withheld. When iron was given it was found that on an average, after five hundred cubic centimetres of blood had been withdrawn, eleven days elapsed before the hæmoglobin returned to its previous level. Another interesting observation was that the hæmoglobin percentage usually continued to rise for some time after iron was withheld. Santy concludes from this that in order to supply sufficient stored iron to compensate for the expected fall in the hæmoglobin level, the best time to give iron is before the blood has been withdrawn. A calculation, which is admitted to be subject to a certain amount of error, of the total amount of hæmoglobin in the circulation showed that the average donor in Santy's series could not maintain a positive balance unless he took iron. The donors who received iron gained on an average 5·77 grammes of hæmoglobin a day; from this it is calculated that they could be expected to give 500 cubic centimetres of blood at intervals averaging two weeks without lowering of the hæmoglobin level. The final conclusion is that the diet of regular donors should be supplemented with iron.

This work may be regarded from two points of view. The first is the purely scientific and clinical one that has to do with the early return to a normal hæmoglobin value after withdrawal of blood from a donor. A full discussion of this would involve consideration of the whole question of the metabolism of iron, a complicated subject, and one in which many gaps remain to be filled. It may be useful to recall the fact that only a small amount of the iron given therapeutically is absorbed; if it were not so, doses would have to be reduced by large amounts or death would occur. Hurst has stated that when thirty grains of iron and ammonium citrate are given three times a day the hæmoglobin value generally increases by about 1% a day. Santy's work shows that when persons act as regular blood donors they will be able to render satisfactory service much oftener if they take iron. Clearly also such donors should have their blood examined at regular intervals. The second point of view has to do with the occasional donor or one who gives blood on one occasion only. These persons are always healthy and it will not matter a great deal if the regeneration of their hæmoglobin is not particularly rapid. When occasional blood donors are being sought for blood bank purposes it will not be helpful if volunteers are faced with the prospect of having to take iron for some weeks.

[1] *The American Journal of the Medical Sciences*, June, 1941.

A GLOSSARY OF PSYCHOLOGICAL TERMS.

The Brain Injuries Committee of the Medical Research Council has recently prepared "a glossary of psychological terms commonly used in cases of head injury",[1] with the object of achieving a greater measure of uniformity and succinctness in the terminology used in recording observations upon patients. The glossary is very brief and defines such terms as coma, semicoma, confusion (in its several degrees), delirium, traumatic stupor, traumatic intellectual impairment, amnesia and a number of others.

The definitions are also quite brief, and to some of them are appended helpful footnotes, for example the following:

COMA: A State of absolute unconsciousness, as judged by the absence of any psychologically understandable response (including, for example, change of expression) to external stimuli or inner need.

Note: If a patient is comatose it is important to record the state of activity at levels of nervous integration lower than that which is the substratum of consciousness. Such activities are reflex—e.g. swallowing, pupillary and corneal reflexes, tendon jerks, plantar responses. It is not uncommon to hear it said of a patient who is comatose and cannot swallow that he is "deeply unconscious". This statement has no real value. He should be said to be comatose with loss of swallowing reflex.

It is possible, as the committee admits, that some of the definitions may not readily find universal acceptance. The definition of comprehension, for example, as "capacity to integrate diverse percepts and/or ideas and to understand the relation between them and one's personal experience" does not seem likely to be of help to anyone. However, the glossary will be sure of a wide welcome not only by those especially interested in head injuries, but by physicians generally. Its contents should be presented to medical students, and it should be studied by everyone who is concerned in the making of clinical records.

[1] Medical Research Council War Memorandum Number 4. London: His Majesty's Stationery Office. Price: 1d. net.

THE JOURNAL OF CLINICAL ENDOCRINOLOGY.

For some years the Association for the Study of Internal Secretions has published a journal known as *Endocrinology*; it is widely recognized as a reliable scientific publication. The science of endocrinology is expanding rapidly and the clinician is finding it difficult to keep pace with each new advance; the subject may be divided into two aspects—one concerned with research and the other devoted to the clinical side. Hitherto both of these aspects have been covered by *Endocrinology*. The Association for the Study of Internal Secretions has now decided to deal with the clinical side of the subject in a new journal, *The Journal of Clinical Endocrinology*. The first issue appeared in January of this year and subsequent issues will be published every month. The articles in the first issue deal with hypothyreoidism, parathyreoidism, parathyreoid therapy, eunuchoidism, endocrine gynæcology and adrenocortical deficiency. From now onwards *Endocrinology* will be devoted entirely to experimental endocrine research. The publication of two journals instead of one is logical and is likely to meet the needs of different types of readers. Further information can be obtained from Charles C. Thomas, 220, East Monroe Street, Springfield, Illinois, U.S.A.

Abstracts from Medical Literature.

PHYSIOLOGY.

Factors in the Intestinal Absorption of Carbohydrates.

ROSE P. MARRAZZI (*The American Journal of Physiology*, November, 1940) records the conflicting statements already appearing in the literature on the intestinal absorption of carbohydrates, and describes further experiments. The absorption of glucose, a metabolizable sugar, and of xylose, a non-metabolizable sugar, was studied in rats deprived of their adrenal glands, in "sham operated" rats, in fasting rats not operated on, and in rats that were not fasting and were not operated on. The absorption of glucose in rats from which the adrenals had been removed was decreased even though sodium chloride was supplemented, whereas that of xylose was not. "Sham operated" rats showed a similar decrease in the absorption of glucose. The food intake of both the rats without adrenal glands and "sham operated" rats was found to decrease after operation. Restriction of food intake or fasting was found in itself to decrease absorption of glucose, but not of xylose, in animals not operated on. It appears that the reduction of food intake induced by post-operative anorexia and the surgical manipulation can account for the decrease in the absorption of glucose in animals from which the adrenals have been removed. It is probable that anorexia alone can account for it.

Respiratory and Metabolic Effects of Hypothermia.

D. B. DILL AND W. H. FORBES (*The American Journal of Physiology*, April, 1941) describe the respiratory and metabolic effects on schizophrenic patients of an experimental hypothermic treatment recently instituted at the McLean Hospital, Massachusetts. The naked and lightly anæsthetized patient is placed between rubberized blankets. These contain rubber coils through which a refrigerated fluid at a temperature of −2° to −5° C. flows. The heat transfer is moderately effective and the skin temperature may fall 20° C. or more. Peripheral vasoconstriction and shivering occasionally delay the fall in rectal temperature for some hours. When it does begin to fall, regulation is effected by adjusting the flow and temperature of the circulatory fluid. Within one to four hours the administered anæsthetic has been dissipated and thereafter cold alone provides the only anæsthesia. The lowest rectal temperature encountered was 24·2° C. The total energy exchange throughout long periods of subnormal body temperature may remain above the basal level and may be two or even three times greater than this basal level. This increase is due to shivering, voluntary activity and a muscular rigidity of unknown origin. It was in some cases difficult to straighten the forearm in order to withdraw blood from the antecubital vein. This state can hardly be one of voluntary contraction, since the performance of so much static work would occasion exhaustion and a degree of hyperpnœa and lactic acid accumulation surpassing those seen in any of these patients. It may not be described as "cold rigor", for in isolated muscle the lower the temperature, the slower the development of rigor. The effects of the temperature change on the blood as a physico-chemical system are described. The observed effects include those that could be predicted and others that reflect physiological responses to cold. There is a trend towards acidosis, evidenced by a reduction up to one-half in the alkaline reserve, in spite of the fact that *in vitro* the alkaline reserve of blood increases with decreasing temperature. The hyperventilation present provides additional evidence of a decreasing alkaline reserve. The expired air may contain less than 1·5% carbon dioxide when the arterial partial pressure of carbon dioxide is only slightly reduced. Despite the hyperventilation and the presumed increase in the alveolar partial pressure of oxygen, the arterial partial pressure of oxygen decreases. These facts point to a lowered diffusion in the lungs, a deduction supported by Walther's observation of pulmonary œdema in hypothermic rabbits. Within the range of observation, the shift in the oxygen dissociation curve to the left was sufficient to maintain a normal arterial saturation with oxygen. Respiratory regulation remains effective even at 25° C. Not only the acid-base balance, but perhaps also the arterial partial pressure of oxygen is concerned in this function.

Recovery of Function following Arrest of the Brain Circulation.

H. KABAT, C. DENNIS AND A. B. BAKER (*The American Journal of Physiology*, April, 1941) describe the results following arrest of the cephalic circulation in dogs by a new method already described by them. The course of recovery is qualitatively similar, but differs quantitatively in different dogs, depending on the duration of the arrest of the cephalic circulation. The course of recovery may be conveniently divided into six stages: period of early return of function, period of hyperactive coma, period of quiescent coma, period of apathy and severe ataxia, period of residual ataxia, recovery. Complete arrest of the brain circulation results in disappearance of the corneal reflex in ten seconds and of respiratory function in twenty to thirty seconds. Arrest of the cephalic circulation causes spinal shock, which passes off gradually after blood flow is restored. After arrest of the brain circulation for six minutes or less complete recovery of function apparently occurs, while circulatory stasis for eight minutes or longer results in permanent severe damage to the brain. The effects of cephalic stasis are the same for each period of stasis investigated, regardless of the sex, weight or breed of the animals. Relatively soon after restoration of function of the vital centres a period of hyperactivity and reflex hyperirritability ensues, which persists for several hours. This period is characterized by vigorous, rapid, coordinated running movements of all four limbs, carried out with the animal lying on his side in coma. No epileptiform convulsions have ever been observed following complete arrest of cephalic blood flow. Coma may persist for as long as twenty-four hours after only four minutes of arrest of the brain circulation. The coma is characterized by loss of auditory reflexes, vestibular and other righting reflexes, in addition to loss of function of the cerebral cortex. Early in coma a moderate spasticity is evident, while later a flexor rigidity suggestive of involvement of the basal ganglia becomes apparent. Following coma there is a transition period lasting several days, which is characterized by gradually improving function of the cerebral cortex and of the righting mechanisms, as well as by severe ataxia of cerebellar type. In dogs which recover consciousness, the most persistent neurological dysfunction is ataxia. This gradually disappears, leaving an animal which cannot be distinguished from the normal. The permanently defective brain function produced by eight minutes of arrest of brain blood flow consists of loss of function of the cerebral cortex, loss of auditory reflexes, of the ability to stand and walk, of emotional reactions and vocalization as well as dysfunction suggestive of striatal involvement.

Gum Acacia and the Oxygenation of Red Cells.

J. VICTOR MONCKE (*The American Journal of Physiology*, March, 1941) describes experiments which indicate that gum acacia, when used in concentrations common to clinical usage, neither inhibits nor retards the rate of oxygenation of red cells *in vitro* or *in vivo*. He criticizes the experiments of Studdiford, which were tendered in support of the original clinical observations of Christie, Phatak and Olney, who suspected deficient gas transport in their patients, on account of the massive nature of the injections, which would cause an embarrassing increase in blood volume and probably in blood viscosity. Gum acacia is the most satisfactory blood adjuvant available and should be indicated as an emergency measure whenever blood or plasma is not available. Increasing caution and consideration are to be observed, however, when the problem of repeated injections presents itself. The work of Andersch and Gibson, and more recently that of Heckel, Erickson, Yuile and Knutti, has established the fact that complications beyond control result from multiple injections of gum acacia. A certain amount of the gum in each injection is stored as inert material in the hepatic cells. When repeated injections are given, such large amounts are stored that drastic disruption of the normal functioning of the organ is brought about.

The Effect of Hypoxæmia on Ventilation and Circulation in Man.

E. ASMUSSEN AND H. CHIODI (*The American Journal of Physiology*, March, 1941) produced hypoxæmia on themselves by breathing of carbon monoxide and by breathing air containing diminished amounts of oxygen. Their results showed that hypoxæmia caused by partial (20% to 30%) carbon monoxide poisoning (anæmic hypoxæmia) elicits little or no respiratory response, whereas hypoxæmia caused by an alveolar oxygen partial pressure of 40 millimetres of mercury (hypoxic hypoxæmia) causes a very pronounced hyperventilation both at rest and at work. They conclude that general oxygen lack in the tissues does not evoke a hyperventilation. It is the oxygen tension of the arterial blood and not its oxygen content which is the active factor in causing hyperventilation, the effect being produced by the oxygen pressure in the carotid body. In the case of the anæmic hypoxæmia either at rest or during work, the cardiac output was unchanged, but the

pulse rate was increased considerably. In hypoxic hypoxæmia sufficient to lower the arterial hæmoglobin saturation to 70%, the cardiac output was increased both at rest and at work. Apparently oxygen lack in the tissues is not a stimulus for circulation. The effect is produced by the agency of the carotid glomus, by the lowered oxygen tension in the arterial blood and not by a lowered oxygen content of this blood.

BIOLOGICAL CHEMISTRY.

Effect of Iron and Copper Deficiencies on Catalase Activity.

M. O. SCHULTZE AND K. A. KUIKEN (*The Journal of Biological Chemistry*, February, 1941) have shown that in experimental copper deficiency in rats the catalase activity of liver, kidney and blood is greatly decreased. The feeding of copper to the deficient rats induces a rapid return toward normal catalase activity. It therefore appears that the effect of copper deficiency on catalase activity is similar to its effect on the formation of hæmoglobin and on cytochrome oxidase activity. Iron deficiency also leads to a decreased catalase activity of liver, kidney and blood.

The Effect of Vitamin C on Workers Exposed to Lead Dust.

S. W. MARCHMONT-ROBINSON (*The Journal of Laboratory and Clinical Medicine*, June, 1941) has carried out an investigation on 303 regular employees exposed to lead dust in the assembling of automobiles. All the men were subjected to physical examination and had a "basophilic aggregation count" made once a month. The first routine medication for all exposed to lead dust was the administration once a week of a solution of magnesium sulphate to which citric acid was added. This was objected to by the men and in its place fifty milligrammes of ascorbic acid were given every day after the noon luncheon period. After a short period there was a noticeable decrease in muscular fatigue, an increase in efficiency and a feeling of well-being with a cheerful demeanour being noted. During a period of five months the basophile aggregation count showed a slow but progressive decline. The urine was also examined for lead once a week for a period of seven weeks. The amount of lead excreted in the 303 cases is set out in a table. The average over-all excretion of lead by 303 men equalled 77γ per litre. The author points out that his study confirms the contention of Holmes that vitamin *C* (ascorbic acid) has a detoxifying action on lead in the human body. He cannot, however, agree that the excretion of lead in the urine is decreased by the administration of vitamin *C*. He cannot reconcile his findings with those of Shiels and those of Blumberg and Scott, that there are definite levels of concentrations for lead, in both urine and blood, above which lead poisoning is found. Judged by the criteria of blood cell counts, physical conditions and lack of symptoms usually associated with chronic lead absorption, the subjects of the author's study showed no evidence of lead intoxication whatever. Fairhall has stated that a high urinary excretion of lead is not of itself evidence of lead intoxication, but rather of lead absorption only. The author found no evidence that the storage of lead is promoted by vitamin *C*; rather the reverse is true. He states that further investigations in the deleading properties of vitamin *C* are being undertaken. He concludes with the remark that it seems possible that the effect of lead on the human economy may be only indirectly toxic, the absorption of lead producing an avitaminosis *C*; this is the condition of vague symptoms known as chronic lead poisoning, but is in reality chronic subclinical scurvy.

Urinary Protein and Amyloid Nephrosis.

S. BERG (*Archives of Internal Medicine*, May, 1941), in a study of the physiology of protein excretion by diseased kidneys, has determined protein partitions on twenty-four hour specimens of urine from sixteen men suffering from amyloidosis following tuberculosis. He found that the blood protein could be maintained at a physiological level without the formation of œdema by diets containing sufficient nitrogen in cases in which the excretion of protein in the urine was as high as fifteen grammes a day. The author's conclusions are as follows. The synthesis of fibrinogen is not impaired by the presence of heavy deposits of amyloid in the liver. The albumin-globulin ratio of the blood does not influence the albumin-globulin ratio of the urine. In cases of advanced renal amyloidosis the urinary proteins usually, but not always, contain high percentages of globulins; globulins may be entirely absent. The albumin-globulin ratios of samples of urine passed during the day were found by the author to be uniformly lower than the albumin-globulin ratios of samples passed during the night. Fibrinogen is found fairly often in the urine in cases of amyloid nephrosis in which the patient excretes large proportions of globulins; in the author's series it was always found during the day, when the patient had been as active as usual, and never during the night, when he was at rest. Changes in the urinary albumin-globulin ratios are a better index of progress of the renal lesions in amyloid nephrosis than estimation of the total protein excretion in the urine. The hourly excretion of protein and the urinary albumin-globulin ratios during the day are variable in the case of patients on a diet rich in protein and under the usual routine in a sanatorium. In itself the determination of the urinary protein fractions is of no value in the differential diagnosis of amyloid nephrosis. From an analysis of the content of albumin, globulin and fibrinogen of the urine it appears that all the glomeruli do not take an active part in urinary secretion throughout the day; the more severely affected glomeruli function only when an increased demand is made on the kidneys, and the less severely affected glomeruli function during basal conditions.

Possible Adaptation to a Low Intake of Vitamin B_1.

F. M. MEYERS (*The American Journal of the Medical Sciences*, June, 1941) has investigated a series of Javanese labourers, under standard conditions, and finds that they have a thiamin output which is considerably lower than the average found in more temperate parts of the world. The daily output of thiamin in the population concerned often fails to produce figures that are sufficiently unequivocal to allow a judgement to be formed as to whether in individual cases a condition of deficiency is present or not. The author holds that a low vitamin B_1 level should not without further evidence be associated directly with a deficiency in the clinical sense of the word. The vitamin B_1 intake of the population considered by him is probably much less than the average intake in other parts of the world and is on a level which may under experimental conditions produce clinical symptoms of deficiency in white people. He suggests that the body adapts itself to a low intake of vitamin B_1.

Phosphorus Retention and Chronic Renal Insufficiency.

S. FREEMAN AND W. M. C. FREEMAN (*American Journal of Diseases of Children*, May, 1941) point out that advanced renal insufficiency is accompanied by an elevation of the inorganic phosphorus content of the blood and frequently by a decrease in the concentration of serum calcium. These alterations may be of importance in precipitating or aggravating certain symptoms which frequently accompany renal insufficiency. No satisfactory regimen has been described for reducing to a minimum the concentration of phosphorus in the blood; nor is it apparent from the literature whether the phosphorus intake in the diet or its absorption is of importance in influencing the inorganic phosphorus content of the serum of persons with renal insufficiency. There is experimental evidence to show that it is possible by the selection of a diet with a low phosphorus content to reduce the inorganic phosphorus content of the serum of normal animals, as well as to reduce the excretion of phosphorus in the urine. It has also been shown that in human beings and in dogs the absorption of inorganic phosphorus from the intestine can be impaired by the ingestion of aluminium hydroxide. The author states that by combining the feeding of a diet with a low phosphorus content with the ingestion of aluminium hydroxide it should be possible to reduce the absorption of phosphorus to a minimum. He has carried out a study on children with renal insufficiency to determine whether the above-mentioned measures, singly or in combination, will effect significant improvement in health and alter the concentration of inorganic phosphorus in the serum and urine of such patients. He has also made observations on a child with normal kidneys. He found that a low intake or absorption of phosphorus resulted in a decrease in the concentration of inorganic phosphorus and an increase in the concentration of calcium in the serum of the children with renal insufficiency. Aluminium hydroxide was effective in reducing the concentration of inorganic phosphorus in the serum and urine of the children with uræmia as well as of the child with normal kidneys. There was a correlation between the concentrations of inorganic phosphorus and calcium in the serum and the clinical manifestations of the disease. The author sees in his findings a rational basis for the use of a diet with a low phosphorus content in the treatment of children with phosphorus retention associated with renal insufficiency. At the same time he discusses some of the difficulties and limitations associated with the use of such a diet.

British Medical Association News.

SCIENTIFIC.

A MEETING of the Victorian Branch of the British Medical Association was held on June 4, 1941, at the Medical Society Hall, East Melbourne, DR. H. BOYD GRAHAM, D.S.O., M.C., the Acting President, in the chair.

Society and Medicine.

DR. JOHN DALE read a paper entitled "Social Aspects of Medicine" (see page 135).

DR. RAMSAY MAILER read a paper entitled "Some Problems of Medical Sociology" (see page 140).

DR. H. BOYD GRAHAM said that Dr. Dale had placed great emphasis on the importance of food and Dr. Mailer on that of employment as remedies for social evils. It might be of interest to members to mention that in 1687 the great Garth had moved the College of Physicians of London to institute medical attention free of charge to all poor people. That action had no doubt firmly established the principle that was ungrudgingly honoured still by every reputable member of the profession. Dr. Boyd Graham went on to say that Dr. Mailer's comments on unemployment had led him to compare the human discards of the business world with the wasted surplus wheat, eggs, meat and apples, to which the daily newspapers were giving prominence. The apples overripening on the trees and rotting on the ground were not allowed to be available for those who needed to eat them but could not afford the market price. The men, women and children of the slums as described by Dr. Mailer had reminded Dr. Graham of the rotting apples. It appeared to him that a common factor was involved in the solution of the human problem and that of undernutrition in a land of plenty with wasted surpluses.

Dr. Graham said that his attention had been directed recently to the Cavendish Lectures entitled "The Future of the Medical Profession", delivered in London in 1918 by Sir Bertrand Dawson, later Lord Dawson of Penn. In those lectures, among many other important matters, an analogy was drawn between the development of provision for education and of that for health. Sir Bertrand Dawson said that education had been haphazard and dependent on private enterprise until comparatively recently, when it had become universal, State and private organizations working side by side. Health organization was following education, though at a distance. The team work and social service measures necessary to the rational development of health organization were also discussed.

Dr. Graham then announced that the Victorian Branch Council was being called together to hold a special meeting on June 12 to discuss measures to be advocated for the future of medicine in Australia, and he invited the interest and cooperation of those members of the Branch who were willing to give the matter some thought and to make constructive suggestions to assist members of the Council to reach wise and acceptable conclusions to their deliberations, which no doubt would be continued for some time to come. In conclusion, Dr. Graham asserted his firm conviction that scientific feeding, technical education and suitable secure employment were rights and not privileges, and that the members of the medical profession should take a prominent part in the campaign in front of them all to make these matters realities and not merely pious hopes.

DR. ROLAND WETTENHALL said that he was much indebted to the previous speakers, who had all met the social problems under discussion in their everyday work. As a constructive point he would like to emphasize that Australia had a potentially fine population; there were not the number of degenerate people found in the cities of Europe. In his practice as a dermatologist he had been in the habit of laying emphasis on dietary to such an extent that people might have thought he was a faddist; he had satisfied himself that malnutrition was not nearly so noticeable in Australian dermatological departments as it was in clinics abroad. Further evidence of the truth of that observation was that in Continental clinics it was usual to reserve as many as 10% of the beds for dermatological patients; but, for example, at the Royal Melbourne Hospital four beds were sufficient (1%). Dr. Wettenhall added that skin conditions were early indicators of malnutrition and that the list of causes of ill health used by Dr. Dale fitted the ideal routine for aetiological investigation in dermatology.

Dr. Wettenhall went on to say that he did not think the medical profession in Australia corporately was aware of the high position it occupied in the community; its members should look to their laurels, and he heartily agreed that their leaders should investigate what the profession could do to assist in remedying social disabilities. It was apparent that the population was badly distributed; hundreds of houses were empty in Horsham, for example, and gross overcrowding was occurring in parts of Melbourne. If the people could be made proud of their homes and their home interests and educated up to that attitude, the tendency to come to town from the country might be arrested. The Country Women's Association was a good organization; hints might be obtained from them which would be worth investigation. Dr. Wettenhall was of the opinion that the clearing out of slums had little to do with the monetary system, but was a matter of faith in humanity and earnest endeavour to assist those in need.

DR. GERALD WEIGALL said that he found himself in entire sympathy with the opening speakers, but expressed a point of view concerning a matter upon which he was aware there was some difference of opinion. In his experience as an employer and an observer of his fellow men, he was convinced that as workers the value of men varied, yet a standard wage was prescribed. Some workers were unintelligent, indolent and alcoholic, whilst others were efficient, keen and thrifty, and any employer would try to secure a man worth his wages. If an employer attempted to engage a man at a wage that was all that he was worth, but was below the minimum wage, both might be prosecuted for breaking an award. That was one of the causes of unemployment which was preventible; people should not have to pay a living wage to a man who was not worth it. The wages fixed were prohibitively high unless the worker was a fair average worker, and it had occurred to Dr. Weigall that the medical profession might be able to assist in the grading of employees according to value. He believed that artificial fixing of wages and of prices for materials was the root of the trouble that had arisen.

DR. R. R. WEBB said that on the evidence placed before the meeting he felt able to make the diagnosis that the condition from which the community was suffering was "capitalism".

DR. A. R. PHILLIPS said that he thought that in their contributions to the discussion Dr. Wettenhall and Dr. Weigall had fallen short of the standard set by the opening speakers. Dr. Mailer, in criticizing the economic system, had begged the question as to why human beings and apples were left to rot. He thought the answer was simply that they were unprofitable; it did not pay anyone to use them. It was already recognized that the State had to make some effort to save people from actual starvation. The possibilities of production and distribution existed, but under the present system the effort must not be made. Solutions were offered by communists, adherents to the Douglas Credit doctrines and other groups, who all thought on the side of the angels. Speakers on social credit used to be ridiculed, but were now getting a hearing; people were today speaking the language and were learning about real economics. They were seeing the decline of a system that had outlived its day and should be replaced by another, to the setting up of which the medical profession must contribute.

SIR JAMES BARRETT said that he wished to endorse what Dr. Mailer had said on the housing question. Dr. Mailer knew the facts about housing and slums and saw what was possible. It was Sir James who had been responsible for initiating the inquiry on the slums which had led to the publication of the special articles to which Dr. Mailer had referred. Most of the slums were on very valuable ground, and people congregated there only because they could not or did not wish to travel far. A town planning act setting up authority and machinery for the planning of garden suburbs, combined with the manipulation of railway rates to put an end to undesirable crowding of population, would be the only satisfactory solution. The Housing Commission had no power to enforce zoning on municipalities. The question had been taken up to the High Court, but no legal remedy had been found; a municipal council could tear up any zoning scheme. What Dr. Mailer had said with regard to housing was absoluutely accurate and most instructive.

Sir James Barrett then pointed out that skilled workmen were not out of work for long. If a skilled man's own job was overstocked, by virtue of his technical training he could even alter his occupation. The Germans had recognized that principle long since and had arranged courses lasting about three years for each industry. Starting from the bottom, for example, a boy would be turned out trained potentially to be an hotel manager. It was a common local experience to have a stream of people seeking employment, saying that they could do anything, which usually meant nothing skilled. As Dr. Dale had said, education was important; but the housing mistake would not be put right until a zoning authority was set up to advise the Government. Sir James Barrett added that before the

war of 1914-1918 Lord Salisbury, in England, had sought the advice of a commission of architects; they had stated that for an average price of £110 a suitable house could be provided, in the right place, in which a man could live and bring up a family decently.

DR. A. H. DOBBIN said that he had been born in Glasgow in 1911; he had come from Scotland and had been practising at Williamstown for four years. He referred to the profit motive as the cause of unemployment; if a depression came along, workers were thrown out of employment because it did not pay to employ them. He deplored the apathy of the medical profession in Australia towards the dreadful social problems that existed; the members would not face up to the demand of the people for better homes, clothing and food. He said that in Britain the medical profession had its own socialist party; but there was nothing comparable in Australia. So far as he could ascertain, the standard of living had been going down steadily since, in 1907, by the Harvester award, artificial basic wages had been fixed. It was ludicrous that the standard of living should be forced down and down while the productivity of the country mounted. He reminded those present that they made more money when there was more illness, and that fact increased the difficulty of getting at the truth. Doctors would be forced to tackle the whole problem of health only by nationalization of the medical profession; that change appeared to him to be inevitable, and it would probably be a good thing for the community. If a doctor was working on a salary basis for approximately one thousand patients it would be in his interest to prevent or minimize ill health; he would thus reduce the amount of work he had to do and could concentrate his attention on the root causes of illness—the economic causes—and help in the search for the solution. It would be found that the profit motive had to be changed to a service motive, not only in the medical profession, but throughout the community. It would not be a question as to how much money a man had made in his lifetime, but rather how much good he had done. They would have to change their haphazard lives to ordered ones and plan not only towns, but everything, for the common good. Dr. Dobbin concluded by saying that the setting up of a ministry of health was essential, and that ministry would have to consider not only medical problems, but economic causes of ill health.

DR. PAUL DANE said the discussion was a healthy sign of a very unhealthy state, in that the conservative British Medical Association was discussing economics. He was sure that the causes of illness were largely economic, but that artificiality was one of the main difficulties. Dr. Dobbin wanted everything to be planned. Dr. Dane thought there had been far too much planning already, including government planning for wages. Four or five hundred years earlier, in the Old Country, a man could work for one month and earn enough to keep himself and the family for the rest of the year and without government assistance.

Dr. Dane then said that taxation was levied in the form of a privilege; a certain section of the community became enriched at the expense of the others; it accounted for more than half the material wealth of Australia. The way out was clear, not through socialistic planning or any new order, but by an attempt to keep the freedom for which their fathers had fought. He urged that they should not decry each other's efforts; he knew that some people thought he was a crank; but if so, he erred in good company. They could not do away with human motives and must be careful not to let the community be caught in the mesh of more and more legislative interference.

DR. JOHN WILLIAMS urged the better education of youth, starting with children of the pre-school age. He had had some extraordinary surprises in his professional investigation of behaviour problems in childhood; he had found children lowly placed in society with excellent intelligence and no opportunity to put it to use. He added that the kindergarten system was regarded as a charity, which was quite wrong; there was great room for improvement in education in all schools, even in the great public schools.

DR. D. M. EMBELTON said that he was very interested in the discussion and in the subject. As a member of the Council of the Victorian Branch he was anxious to promote the coordination of the provision of medical services for the armed forces and the civilian population, which would be more effectively brought about if the whole of the profession could be utilized. Dr. Embelton then said that his object in speaking was to discuss the re-creation of community life, an aspect which had not been mentioned in the discussion. He had visited the Institute of Juvenile Research in Chicago, where community life had been studied and analysed. In the process of the development of a village into a city by the formation of business centres, as the village became a town the value of property rose for business purposes through competition for sites; then the more prosperous citizens moved their residences further out and residential groups near the business centres deteriorated. It was a fact that housing disappeared faster than population, and this led to the formation of densely populated slums. The lesson to be learnt, then, was that the development of business centres broke up community life. It had also often been demonstrated that the incidence of crime was related to the proximity of industry and faded out towards the periphery. The development of community life led, then, to the segregation of people from the centres of industry outwards on a descending economic scale.

Dr. Embelton then said that if the information obtained in the census of 1921 was compared with that of 1923, it would be found that the infusion of factories in the older residential areas of Melbourne was a notable feature. In town planning it was necessary to take a long view over at least two generations. If garden cities were formed, the opening of factories in the area set apart would ultimately break up the community life. He added that, starting from the pre-school age, school children should be interested in service rather than in success. He concluded by pointing out that the whole responsibility for the existing state of affairs should not be thrown on the medical services; as a section of the community they should not alone be nationalized.

DR. FRANK TRINCA summed up the situation presented by the speakers as one which exposed the relationship of disease to want. The speakers had covered the ground which recognized the relationship of many diseases to subnutrition. Dr. Trinca therefore preferred to draw attention to certain basic long-range situations in which want, operating on a communal scale and arising from periodic industrial depressions, provided a long-range background to the short-range problems of want, which was being studied that night.

In explaining the origin and nature of the recent depression, Dr. Trinca said that in 1932 he had published a book, "Science and Democracy", which demonstrated to the satisfaction of authorities on the subject, such as Julian Huxley and Professor Mauldon, that periodic depressions, such as that of 1929, came in their historical sequence as sequels to sporadic waves of invention entailing new forms of power. During recent centuries, including the present, these waves of exploitation of a new power drive by industry had been exemplified, first, by the opening up of the world by the devising of the cargo ship in the Middle Ages, secondly, by the expansion of the steam age, which exploited the world at an added *tempo*, and finally, by the electrical, motor, flying and wireless age. The final climax of development of all these power eras led to periods in which establishment was finally reached in potential output and so in satisfaction of the world's needs. Markets were thus saturated and depressions intervened. The first world war came in the middle of the last or electrical age and speeded up invention by perhaps fifty years in a period of four; necessity here was the mother of invention. When the "sword" of the new "war-derived" processes was turned to the ploughshare of a new phase of speeded-up industrial development, the great post-war boom occurred, reaching its climax of saturation in 1929. From the throes of this depression as it affected Germany (already punished economically and socially by its Great War crimes) arose the opportunity for a Hitler and his fanatical attempt at world conquest. A world which could have internationally settled its problems of want and prestige would not have produced a Hitler.

Researches into the nature of life by Dr. Trinca had revealed that biological science must revise its concepts of instinct. Instinct was not merely a vestigial force. It was an ever-expanding functional expression of growth, which was born of expanding Mendelian forces, of which mind was the sentry and agent. At the present time it was assumed, for want of data, that the instinct or *id* of life was a vestigial and decreasing remnant of early evolution. Dr. Alexis Carell, during an interview at the Rockefeller Institute, agreed with Dr. Trinca that the researches leading to these findings regarding expanding instinct were valid and a useful contribution to biological and sociological law. The practical application of the finding was that, if want stalked the earth, instinct, which was the main emergent core of life, rebelled in its search for living room. It further operated with the catastrophic intensity seen in war and revolution, destroying the finer elements of culture, which were the true essence of civilization. In the future man must devise a better productive and distributional system of planning. By removing the spectre and actuality of want, as a result of better social planning alone, man could prevent the millions of common or domestic men from being used by the occasional fanatical dictators, who in a state of emotional frenzy sent men to their death "in order to live", while in

martial ventures, such as the world wars, men paradoxically destroyed the culture of the ages in order to possess the vacant site on which it once existed.

At the end of his remarks Dr. Trinca quoted the following extract from the book "World Chaos", by Professor William McDougall:

> It is well to remember that when conditions are bad, men are without work, children short of food, the malady from which society is suffering is plain ignorance (of how to manage affairs of economics by knowledge of laws of life). My thesis is that in order to restore the balance of civilization, in order to adjust our social, economic and political life to the violent changes which physical science has directly and indirectly produced, we need to have far more knowledge (systematically ordered or scientific knowledge) of human nature and of the life of society that we yet have. . . . Briefly, then, we urgently need a well-founded theory of evolution such as at present we lack, and we need knowledge of its detailed application to the human race. Secondly, we need the development of the social sciences, economics, politics, etc., for guidance in all social and political problems, in the face of which we stumble blindly along amidst a chaos of conflicting opinions. All of these need for their foundation some such knowledge of the construction of human nature and the principles of development. But we have no biology that can serve as the basis, and the social sciences are but a faulty sketch of a programme. In every branch is the same story. The economic book is full of iron laws. Yet in any true sense is there an economic law anywhere in sight?
>
> I would by every means divert our most powerful intellects from the physical sciences into research into the biological, the human and the social sciences, and our universities should be the main seats of such research. Especially would I at first concentrate the attack upon anthropology, the science of man, concerned in the broadest way. It would take twenty years to train the personnel and get them working on their problems. Then, as they began to bring in their results, part of the available intellectual energy would be concentrated in the effort to build the social sciences, especially a science of economics, on the basis provided by the anthropological research. Can we afford to wait so long? Can our civilization survive in the meantime? I don't feel sure! but I hope it may, for I see no alternative measures that offer hope for its salvation.

MAJOR C. N. ATKINS said that before taking up sanitation work at Southern Command Headquarters he had been medical officer of health of the city of Hobart. There were plenty of medical men who were prepared to devote care and attention to the preventive side of medical problems, but in very few instances were they paid an adequate salary. It was totally inadequate to offer between fifty and one hundred pounds a year for a position as medical officer of health of a municipal district, and it was no wonder that the work was not done. Even such a body as the Health Commission in Victoria could not attempt to carry out its proper functions without a reasonable expenditure of money. Men of sufficient calibre could not be enticed at the price even to qualify for the appointments. No sanitary officers could be obtained for the army as a consequence, and even the military salaries were not attractive. Until salaries were reasonable they would simply have to flounder on, and the discussion that evening would prove fruitless.

Dr. Dale, in reply, said that he thought that Dr. Weigall had implied that he (Dr. Dale) had made no constructive suggestions. It was true that he had limited his proposals to the immediate and urgent needs of the moment, which were that the children should be fed and educated as fully as possible, as a guarantee that there should be no outcasts in the community; surely those common objectives should appeal to all schools of thought. It was obvious that in a democracy those things could be obtained; they should tell their political representatives to obtain them; the labour and physical requirements were plentifully available. In conclusion, Dr. Dale commented that the forty million pounds that had been spent during the financial depression on sustenance and unproductive work for sustenance, if set apart for the purpose, would have provided about ten shillings per week for the children, and that expenditure would represent only about one-twentieth of the national income, which was quite a modest amount to be spent on so desirable an objective.

A MEETING of the New South Wales Branch of the British Medical Association was held on June 19, 1941, at the Royal North Shore Hospital of Sydney. The meeting took the form of a number of clinical demonstrations by members of the honorary medical staff. Part of the report of this meeting appeared in the issue of August 2, 1941.

Fracture of the Neck of the Femur with Subsequent Absorption of the Head.

DR. A. R. HAMILTON showed a boy, aged fifteen years, who was thrown from a horse in August, 1940. In November he was sent from the country to Sydney, and an X-ray examination revealed a fracture of the neck of the femur with rotation of the head. A bone graft was taken from the right tibia and inserted along the neck of the femur in November, 1940. At operation the bone of the head and neck was found to have a poor blood supply and to be sclerosing. An X-ray examination made on May 22, 1941, showed that the head of the femur, together with the graft, was being absorbed.

The patient was admitted to hospital on June 1, when he had fair movement in the hip joint, with limitation of abduction and external rotation. He had about one and a quarter inches of shortening in the affected leg. On June 2 an osteotomy was performed along the line indicated by the position in the X-ray film taken just before operation, after full length of the leg had been obtained by means of the traction table. The leg was then immobilized in a plaster spica with the leg in some abduction. X-ray examinations made subsequently to the operation showed the new position of the femoral fragments to be as required.

Calcium Deposition around the Supraspinatus Tendon.

Dr. Hamilton also showed a male patient, aged forty-nine years, who was seen at the out-patient department in April, 1941, complaining of pain in the right shoulder of eighteen months' duration. There was no history of trauma to the shoulder, and no other joint was involved. The shoulder joint was found to be tender to palpation, especially over the supraspinatus muscle and over the tip of the shoulder. There was no swelling or inflammation. All movements were limited; pain was felt on extreme movement, particularly when the arm was abducted. An X-ray examination revealed calcium deposition around the tendon of the supraspinatus muscle.

The patient was admitted to hospital on April 20, and under local anæsthesia the site of calcification was irrigated with saline solution. No calcium was seen to come away during the irrigation; but when the patient was discharged from hospital on May 26 he had practically a full range of painless movement in the shoulder. The patient later suffered from a left-sided "tennis elbow", with a tender spot over the external epicondyle. This was cured by acupuncture with a hot needle.

Subluxation of First Lumbar Vertebra on the Second Lumbar Vertebra.

Dr. Hamilton finally showed a young girl, who had been struck by a swing-boat on May 26, 1941, and complained of pain in the lumbar part of the spine. An X-ray examination made one month later revealed rotation of the body of the first lumbar vertebra to the right, increase in the joint space of the left intervertebral articulation, and a small avulsion fracture of the body of the second lumbar vertebra. Slight urinary incontinence existed for a few days. Gradual passive rotation was carried out in the opposite direction without an anæsthetic, and skiagrams showed complete reduction. A plaster jacket was then applied, with the patient in a "corkscrew" position.

"Stealing the Thyreoid."

DR. H. HUNTER JAMIESON discussed the procedure in "stealing the thyreoid". He said that in the first place the patients were thoroughly investigated and basal metabolic rate estimations were carried out prior to their admission to hospital. They were admitted fourteen days before operation and were told that the operation would be in three weeks. They were completely isolated and screened, usually on a veranda. It was undesirable to have them in a main ward. The temperature and pulse rate were recorded every four hours. Five minims of Lugol's iodine were given three times a day, with bromide, "Luminal" or other sedatives, according to the pulse rate. The basal metabolic rate estimation was usually repeated only if the clinical picture indicated that the patient was not settling down. Towards the end of the first week the patient was examined by an anæsthetist. At the beginning of the second week a mock skin preparation was carried out and a saline injection was given daily *per rectum*. If the patient was to be operated on in the morning, this was done in the morning and at the same time exactly each day.

On the morning of operation "Avertin" instead of saline solution was injected by the nurse. Then the final skin preparation was carried out. The patient was moved to the operating theatre only after he or she was unconscious.

and anæsthesia was induced by nitrous oxide and oxygen. Dr. Jamieson said that in all cases so far a bilateral thyreoidectomy had been carried out. Not one patient had known that he or she was to be operated on, and they knew nothing about it till they recovered consciousness after operation. The only complications had been one slight thyreotoxic crisis and one or two very mild infections of the incision. On the patient's return to the ward one drachm of Lugol's iodine was given *per rectum*. Tap-water or saline solution was given *per rectum* for twenty-four hours till the patient could drink satisfactorily. Lugol's iodine was given, 20 minims being administered every four hours at first; the dose was gradually reduced and bromide and "Luminal" were given again in decreasing doses as required. The patient was usually kept in bed for twelve to fourteen days and then discharged from hospital. Dr. Jamieson pointed out that it had invariably been a great relief to all patients to know that the much dreaded operation was over without their knowing anything about it. In not one case was it necessary to defer the operation because the patient did not settle down.

Fractured Radius.

Dr. Jamieson showed a male patient, aged thirteen years, who had been admitted to hospital on April 20, 1941. He had sustained a compound fracture of the left radius, through falling off his bicycle. Shortly after his admission to hospital he was taken to the operating theatre, and gross displacement of the bone through the skin was corrected and the skin edges were excised and sutured. On April 30 the wound was cleaned up and the fracture reset; traction was applied by a Thomas's wrench, and a plaster of Paris cast was applied with the hand in palmar flexion and ulnar deviation. On May 3 the patient was anxious to go home, so he was discharged from hospital with instructions to report to the out-patient department. On May 16 he reported that he had had pins and needles in the arm for a few days. He could move his fingers in all directions except extreme extension. He had a cold after leaving hospital, but his health was now excellent.

A Case for Diagnosis.

DR. H. J. HAM showed a male patient, aged fifty-six years. One year earlier the patient had noticed a firm lump just under the right mandible, and since then it had steadily increased in size. Apart from slight "stiffness" on the right side of the neck it caused him no distress. There had been no loss of weight, no cough or sputum, and no night sweats, and he had never had any symptom referable to his mouth, throat, nose or ears. Several teeth were removed one year earlier, but there was no residual soreness or swelling in his mouth afterwards. There were no symptoms referable to the other systems, and no tumours were palpable in the other regions. He had been examined by the honorary ear, nose and throat surgeon, who found no abnormality. The tumour had been submitted for biopsy, but the pathologist's report had not been received.

Epithelioma of the Tongue Treated with Radium.

Dr. Ham then showed a male patient, aged seventy-four years, who had presented himself with a lump on the left antero-lateral aspect of the tongue. He said that he had experienced some tenderness in that part of the tongue for four years previously. He had always been a heavy smoker, holding his pipe on the left side of his mouth. He had been edentulous for the past seven years. His only previous illness was typhoid fever some years earlier. He denied having had venereal disease.

On examination a firm ulcerated tumour, 2·5 by 2·0 centimetres in size, with an indurated base, was found on the left antero-lateral aspect of the tongue. Palpation revealed no involvement of the submental or submaxillary glands, but the left upper deep cervical glands were enlarged, firm and discrete.

On June 6, 1941, 15 milligrammes of radium were applied around the tumour and removed after six days.

Seminoma of the Lung.

Dr. Ham also showed a young man suffering from a large seminoma in the right lung. This had been successfully treated by deep X-ray therapy, and the primary testicular tumour had been removed surgically.

Carcinoma of Lung.

DR. C. G. BAYLISS showed a female patient, aged thirteen years, who on January 23, 1941, had presented herself at the Canterbury Anti-Tuberculosis Clinic with the following history. For the preceding six months she had had a cough. During this time she coughed up small amounts of blood clot every day. Coughing sometimes produced pain on the right side of the chest. No loss of weight or appetite had occurred.

Examination revealed that the child's state of nutrition was fair and her colour fairly good. Dulness and diminished breath sounds were found at the base of the right lung. Anterior bowing of the left tibia was present. No other abnormality was detected on general examination. On January 23 X-ray examination of the chest revealed a circumscribed rounded shadow at the base of the right lung. On March 10 examination with lipiodol showed that no lipiodol entered the shadow area. A number of other investigations were carried out. A blood count gave the following information: the erythrocytes numbered 3,560,000 and the leucocytes 10,609 per cubic millimetre, and the hæmoglobin value was 8·2 grammes *per centum*. The erythrocytes were deficient in hæmoglobin. Of the leucocytes, 72% were polymorphonuclear cells and 28% were lymphocytes. Neither the Mantoux test nor the Casoni test produced a reaction. No tubercle bacilli were detected in the sputum. Estimation of the blood sedimentation rate gave the result 60 millimetres' fall in one hour.

At this stage a provisional diagnosis of hydatid cyst was made, and it was decided to keep the patient under observation. A further X-ray examination on March 20 showed that the shadow had increased in size. Symptoms and signs were much the same as when she was first examined. The diagnosis was still thought to be hydatid cyst, possibly infected, and it was decided to submit her to surgery.

On May 1 the patient was admitted to the Royal North Shore Hospital. Further investigations were carried out. The only difference from the results of those made at the Canterbury District Hospital was that the response to the Casoni test was positive. This seemed to support the diagnosis of hydatid cyst. On May 17 thoracotomy was carried out by Dr. Basil Riley. When the affected tissue was opened, greyish-white gelatinous and also fibrous material was found, and a considerable quantity of blood was present. After withdrawal of this material a cavity was left about the size of a fist. Examination of the material was found, and a considerable quantity of blood examination suggested that the condition was a so-called "oat-cell" carcinoma, the structure being that of malignant neoplasm with the cells tending to be anaplastic in type. Convalescence was at first stormy, and several blood transfusions were necessary. The patient's general condition had, however, improved, and Dr. Ham suggested that deep X-ray therapy might be worth a trial.

Pulmonary Tuberculosis Treated by Monaldi's Method of Intracavitary Aspiration.

DR. BRUCE WHITE showed two patients suffering from pulmonary tuberculosis who were being treated by Monaldi's method of intracavitary suction drainage. The first patient, a young woman, aged twenty-eight years, became ill in 1935 with "influenza", and produced blood-streaked sputum. A diagnosis of pulmonary tuberculosis was made. Her condition improved with home treatment until early in 1940, when she relapsed, and her cough became worse and the amount of sputum increased. In September, 1940, she reported to the pulmonary unit of the Royal North Shore Hospital. Extensive disease of the right lung was found, with a large cavity in the right upper zone. Many tubercle bacilli were found in the sputum. The cavity in her lung was of giant proportion, and it was deemed inadvisable to attempt any major surgical procedure. When, however, reports of the Monaldi minor surgical procedure reached this country, it was decided to undertake a trial of the method in this case. Under local anæsthesia the trocar was inserted into the cavity and the catheter was introduced. Continuous negative suction by day by means of bottle siphonage was carried out. Approximately four to six ounces of pus were evacuated from the cavity every day. X-ray examinations at intervals of two or three weeks had revealed no decrease in the size of the cavity. Clinically the patient's condition was improved, but it could not be said that any great advantage other than experience to members of the pulmonary unit had resulted from the use of the method in this case. It would hardly be fair, however, to consider the case as an ideal one according to the standards of Monaldi and his co-workers.

The second patient was a woman, aged thirty-seven years, who had been seen by Dr. Cotter Harvey in the first instance in January, 1938. She had had a cough with sputum and symptoms of lassitude and loss of weight for several years. At that time extensive tuberculous disease of the left lung had been found. A large cavity was apparent in the left upper zone. She had had artificial pneumothorax treatment and a good degree of collapse of the lung was

obtained, with the exception of a band-like adhesion which prevented complete control of the cavity. Refills of air were given at regular intervals, in the hope that the cavity might be closed. After several months' treatment this had not occurred and an attempt at pneumolysis was unsuccessful. Paralysis of the phrenic nerve by crushing was therefore carried out. Artificial pneumothorax treatment was also continued for nearly three years, because the patient's general condition continued to improve and the cough and sputum were much decreased. Finally it was abandoned in November, 1940. The patient remained moderately well until March, 1941, when she commenced to lose weight, the severity of the cough and the amount of sputum increased and serial skiagrams revealed progressive increase in the size of the cavity. At the time of her admission to hospital the cavity was ovoid in shape and approximately four inches in the long diameter and one and a half inches in the short diameter. Considerable atelectasis of the left lung was present, as evidenced by the airlessness of the lung and displacement of the heart to the left side. At the time of the meeting, seven weeks after suction drainage treatment, the patient's condition had improved and the cavity had been reduced in size to an area, circular in shape, approximately one inch in diameter. The cough and sputum were now much less and there had been progressive diminution in the quantity of sputum drained. Ten days previously, however, the patient had suffered pain in the left side, with a febrile reaction, and a skiagram taken then had shown that the catheter had slipped out of the cavity. Apparently suction had caused trauma to the lung tissue. The catheter therefore was withdrawn for the time being. It was proposed to reintroduce the catheter within a few days and to employ motor suction in future.

Dr. White pointed out that these two patients were undergoing a trial of what promised to be an important advance in the treatment of lung cavities by a method which was comparatively simple. It could be applied to cases in which the simpler collapse measures were not applicable, or were unsuccessful, and it was reasonable to hope that it might replace the more drastic surgical procedures which were at present in use in many cases. Dr. White said that while he fully realized the benefit of the procedure of thoracoplasty, it was a very formidable, mutilating type of operation, and one to avoid which every effort should be made. At a later date it was hoped to publish reports of the ultimate results of these and other cases. Dr. White drew attention to the recent résumé of the Monaldi method in THE MEDICAL JOURNAL OF AUSTRALIA of June 7, 1941.

Huntington's Chorea.

DR. B. T. SHALLARD discussed the clinical history of a male patient, aged fifty years, who had had irregular generalized twitchings for the last eight or nine years. This condition did not follow any illness such as rheumatic fever; it occurred without any apparent cause. He had eight brothers and sisters, all of whom were alive and well, and his parents also were alive and well. His grandfather was said to have had a similar condition and to have suffered from Saint Vitus's dance for thirty years before his death.

On examination the patient presented a constant rolling movement of the head, with a form of gyric twist of the neck and eyes and repeated blinking. He had a trombone tongue. Chorio-athetoid movements of the hands and feet were noted. His speech was much slurred and his cerebration was poor. Motor power was diminished in the arms. All the reflexes were present, equal and exaggerated. Sensation was normal. No reactions were produced by the Wassermann test and the Kahn flocculation test.

The patient was treated with phenobarbitone, with good results.

Glycogen Accumulation.

Dr. Shallard then showed a female patient, aged one year and eight months, who had been admitted to hospital on June 10, 1941. The child's abdomen was enlarged and her development was retarded. She was one of twins, and the mother said that the abdomen had been larger than that of the other twin since the patient was aged three months. The mother, aged thirty-two years, and the father, aged thirty-six years, were well. They had had six children. The eldest, a girl, born in 1930, suffered from von Gierke's disease; her history up to the age of three and a half years was recorded by Dr. A. W. Holmes à Court in June, 1934. This child later died, apparently of an intercurrent infection. The second and third children, a boy, aged nine years, and a girl, aged eight years, were alive and apparently normal. The fourth child was admitted to the Royal North Shore Hospital in December, 1940, with symptoms suggesting acute gastro-enteritis. She died fourteen hours later. Autopsy revealed streptococcal peritonitis involving the appendix, and hepatomegaly, almost certainly due to von Gierke's disease. (Dr. Shallard showed specimens from this child.) The remaining children were twin girls, one of whom was the patient who was shown. The Wassermann test carried out on the mother and children on many occasions had failed to produce a reaction. The parents and the remaining children appeared healthy and reasonably well fed. The patient was breast fed until January, 1940, when she was aged fifteen months. She was then admitted to hospital for three weeks for observation. Photographs showed her condition at that time. In addition to enlargement of the abdomen and delayed development, she suffered from diarrhœa, with pale "rancid" stools.

The Royal North Shore Hospital Instrument Trolly for Bronchoscopy.

DR. E. P. BLASHKI showed and described the Royal North Shore Hospital instrument trolly for bronchoscopy. He said that the trolly had been designed and made by the staff of the hospital. He did not claim it as his own design. Indeed, many features had been suggested by a number of persons, including theatre sisters and the workshop staff under Mr. Richardson, and also Mr. Needham, the hospital instrument man. To the enthusiasm and skill of all these workers the success of the table was to be attributed.

The trolly was made of wood and mounted on large rubber castors. The top was of plated copper and was fitted with a spring clip to retain the back edge of the sterile sheet which covered it. At the rear part of the top were four holes fitted with wide copper tubes of differing lengths. These were to hold bronchoscopes *et cetera*, scabbard-wise, making them easy to find and handle. The table had three large locking drawers to hold the instruments; these drawers were lined with felt and the instruments were retained in place by elastic loops. Under the drawers was a powerful suction pump, which was removable together with its twin receiving bottles. These were attached by rubber tubes to the end panel, where they were connected to the leads from the patient.

An important feature was the "Bakelite" panel at the end of the trolly. This was fitted with the electric lead-in from the mains and control switch. There were four electric outlets of different voltages. The two on the left gave from 0 to 6 volts and were actuated by a battery. The two on the right gave respectively 0 to 6 volts and from 0 to 12 volts and were actuated by transformer. Each outlet had its own rheostat, and the connexions with the bronchoscopes *et cetera* were by jack and plug. The plugs were made in such a way as not to be interchangeable. All electrical installation was earthed. There were four suction outlets, each controlled by a cock. This assembly was readily removable for cleaning and sterilizing. The height of the table was three feet three inches, and the top measured three feet three inches by two feet.

Naval, Military and Air Force.

APPOINTMENTS.

THE undermentioned appointments, changes *et cetera* have been promulgated in the *Commonwealth of Australia Gazette*, Number 149, of July 31, 1941.

CITIZEN NAVAL FORCES OF THE COMMONWEALTH.

Royal Australian Naval Reserve.

Appointment.—Kenneth Newman Morris is appointed Surgeon Lieutenant, dated 4th July, 1941.

AUSTRALIAN IMPERIAL FORCE.

Australian Army Medical Corps.

Colonel R. A. Money, M.C., E.D., and Lieutenant-Colonel (Temporary Colonel) F. H. Beare, E.D., are appointed to command Australian General Hospitals, 31st May, 1941.

Major W. Park is appointed to command a Casualty Clearing Station, 31st May, 1941.

The undermentioned officers are transferred to the Regimental Supernumerary List from the dates shown: Major B. Moore, 20th May, 1941; and Captains E. W. Levings, 18th April, 1941; J. A. F. Flashman, 22nd April, 1941; and E. V. Barling, D. N. F. Leake, N. H. Rose, J. W. McNamara, F. G. Meyer and W. R. Davison, 20th May, 1941.

To be Colonel.—Lieutenant-Colonel (Temporary Colonel) G. W. Macartney, D.S.O., E.D., and to command an Australian General Hospital, 20th June, 1941.

To be Lieutenant-Colonel.—Lieutenant-Colonel R. L. Kenihan, M.C., and to command a Hospital Ship, 24th June, 1941.

To be Majors.—Captains C. E. A. Cook, O.B.E., 1st July, 1941; and E. A. Brearley, 26th June, 1941; and Honorary Captains G. G. R. Weigall, J. C. Hemsley and D. H. Mitchell, 1st July, 1941.

To be Captains.—Captains S. B. M. White, 1st July, 1941; and J. Morlet, 20th June, 1941; Richard Grey Vernon Parker, 20th June, 1941; Honorary Captains R. A. Spence and J. E. Traill, 1st July, 1941; and Keith Macrae Bowden, and John Summons, 1st July, 1941.

Captain D. de la F. Henry is transferred from Reinforcements and to be Major, 3rd July, 1941.

To be Major.—Captain K. B. Burnside, 2nd June, 1941.

To be Lieutenant-Colonels (temporarily).—Majors W. F. MacCallum, D.S.O., M.C., and to command a Reinforcement Depot Training Wing, 18th May, 1941; and G. G. L. Stening, and to command an Australian General Hospital, 27th May, 1941.

The undermentioned officers are transferred to the Regimental Supernumerary List to date 7th June, 1941: Lieutenant-Colonel L. E. Le Souef, Major J. D. Palandri and Captains W. W. Gunther, R. A. Playoust, K. J. J. Dorney, N. R. Godby, M. Mayrhofer, A. J. King and F. E. Gallash.

The undermentioned officers are transferred from Reinforcements from the dates shown: Major W. V. Russell and Captains I. L. Kelf and L. J. Cains, 8th April, 1941; and A. A. Merritt, 16th April, 1941.

The undermentioned officers are transferred to the Regimental Supernumerary List from the dates shown: Lieutenant-Colonel K. J. G. Wilson, 4th June, 1941, and Captains P. C. Thomas, 3rd June, 1941, J. J. Ryan, M.C., 6th June, 1941; and A. G. G. Carter, 2nd June, 1941.

Permanent Supernumerary List.

Major R. T. Binns and Captain G. Gilbert are transferred from the Army Medical Corps, 16th May, 1941.

The undermentioned officers are transferred from the Australian Army Medical Corps from the dates shown: Major B. Moore, 21st May, 1941, and Captains D. N. F. Leake, N. H. Rose, F. G. Meyer, E. V. Barling, W. R. Davison and J. W. McNamara, 21st May, 1941, and I. Jacobs, 26th May, 1941.

AUSTRALIAN MILITARY FORCES.

AUSTRALIAN ARMY MEDICAL CORPS.

Northern Command.

First Military District.

Captain (Temporary Major) J. A. McGree is appointed to command a Field Ambulance, 24th February, 1941.

Captain (provisionally) L. S. Davies is transferred to the Reserve of Officers (A.A.M.C.), 29th May, 1941.

To be Captain (provisionally).—Harold John Rowe, 30th June, 1941.

The resignation of Captain N. W. Martin of his commission is accepted, 27th July, 1941.

To be Honorary Captains.—John Glasgow Morris and Francis Kenneth Lyle Hossack, 27th June, 1941.

To be Honorary Captains.—Robert Hughes Black and Stuart Montserrat Stephenson, 3rd July, 1941.

Eastern Command.

Second Military District.

Lieutenant-Colonel Sir Charles B. Blackburn from the Retired List (A.A.M.C.) is appointed Senior Physician of a General Hospital, 26th April, 1941.

The following officers are appointed from the Reserve of Officers (A.A.M.C.) on the dates shown: Lieutenant-Colonel J. Leah with pay and allowances of Major, 18th June, 1941, and is supernumerary to the establishment of Lieutenant-Colonels, and Honorary Captains C. W. S. Dun and L. May and to be Captains (provisionally), 21st June, 1941.

Captain W. Freeborn is seconded, 8th July, 1941.

To be Captains (provisionally).—Donald Boyd Sillar, 19th September, 1940, and Edward Philemon Connolly, 25th June, 1941.

To be Honorary Captains.—Thomas Le Gay Brereton, 10th May, 1941; Harry Keith Uren, 12th June, 1941; John Eric Traill, Brian Russell Morey, Arthur Charles Crisp, 13th June, 1941; Leslie Sender, 14th June, 1941; Keith Walker Locke, Richard Grey Vernon Parker, 17th June, 1941; James Fraser Boag, Merrick John Justyn O'Reilly and Richard Stanley Stafford, 18th June, 1941.

To be Captain (provisionally).—William Alick Bye, 31st December, 1940 (in lieu of the notification respecting this officer which appeared in Executive Minute No. 15/1941 promulgated in *Commonwealth Gazette* No. 20 of 1941).

To be Honorary Captains.—Sydney Keith Dwyer, Herbert Merwin Bourke, 7th July, 1941; Archibald Sprott Boyd and Allan Muir Bryson, 8th July, 1941.

Southern Command.

Third Military District.

Honorary Captain W. I. E. Mackenzie is appointed from the Reserve of Officers (A.A.M.C.) and to be Captain (provisionally) and is seconded, 1st November, 1940 (in lieu of the notifications respecting this officer which appeared in Executive Minutes No. 14/1941 and 93/1941, promulgated in *Commonwealth Gazette*, Nos. 20 of 1941 and 105 of 1941 respectively).

Lieutenant-Colonel W. J. Newing is appointed to command a General Hospital, 23rd April, 1941.

Captain (Temporary Major) M. G. Edison is appointed to command a Field Ambulance, 18th March, 1941.

The following officers are appointed from the Reserve of Officers (A.A.M.C.) and to be Captains (provisionally): Honorary Captains G. G. R. Weigall and D. H. Mitchell, 30th June, 1941, and R. Wall, 31st October, 1940 (in lieu of the notification respecting this officer which appeared in Executive Minute No. 3/1941, promulgated in *Commonwealth Gazette* No. 7 of 1941).

To be Captains (provisionally).—Frank Robertson Vincent, James Cockburn Whitehead and John Summons, 25th June, 1941.

The notification respecting the appointment of Honorary Captain Robert Wall which appeared in Executive Minute No. 55/1941, promulgated in *Commonwealth Gazette*, No. 55/1941, is cancelled.

To be Honorary Major.—Honorary Captain F. H. Moran, 19th June, 1941.

To be Honorary Captains.—Alan Percival Tenny, 19th June, 1941; and William McIntosh Rose, Ronald Francis Lowe, Peter Reginald Slater, Louis Rabinov, Francis Joseph Hayden, Mary Allison Ingram, James Moore Andrew, Michael Harold Southwick, Gordon Wearing Smith, Wilfred Edward Fleming, John Clark Spencer, James Ross Morris, Salvatore Gaetano Lauricella, Edward Gregory Bannon and Elgin Gustav Dahlenburg, 25th June, 1941.

Honorary Captain F. P. G. Smith is appointed from the Reserve of Officers (A.A.M.C.) and to be Captain (provisionally), 30th June, 1941.

To be Lieutenant-Colonel (temporarily).—Major V29255 J. M. Buchanan, 24th June, 1941.

To be Captain (provisionally).—Frank Christopher Henry Davies, 1st July, 1941.

To be Honorary Captains.—Arthur William Harold Booth, 27th June, 1941; and Adelaide Gertrude Gault, 1st July, 1941.

Fourth Military District.

Lieutenant-Colonel D. L. Barlow, M.C., E.D., from the Unattached List is appointed to command a Convalescent Depot, with pay and allowances of Major, 15th March, 1941.

Major F. N. Le Messurier, D.S.O., from the Reserve of Officers (A.A.M.C.) is appointed to command a General Hospital, 15th November, 1940, and is granted the rank of Lieutenant-Colonel (temporarily), 1st June, 1941.

The following officers are appointed from the Reserve of Officers (A.A.M.C.) and to be Captains (provisionally) from the dates stated: Honorary Captains L. A. Wilson, J. R. Cornish and W. R. C. Morris, 6th November, 1940, and T. A. B. Jones and A. E. Platt, 21st April, 1941.

To be Major (temporarily).—Captain (provisionally) J. G. Porteus, 22nd May, 1941.

To be Honorary Captains.—William Bernard Dorsch, 23rd May, 1941; Clarence Oscar Ferrero Rieger and Wallace Wilson Jolly, 31st May, 1941; Bruce Ernest Lawrence, 2nd June, 1941; Geoffrey Ernest Peters, 5th June, 1941; Harvey Herbert Hurst, 9th June, 1941; John Selby Covernton, 16th June, 1941; Malcolm William Miller, 18th June, 1941; Darcy Rivers Warren Cowan, 19th June, 1941; and Wilbur Francis Joynt, 21st June, 1941.

Honorary Captain A. C. McEachern is appointed from the Reserve of Officers (A.A.M.C.) and to be Captain (provisionally), 30th June, 1941.

The notification respecting the appointment of Honorary Captain Jack de Vidas which appeared in Executive Minute No. 96/1941, promulgated in *Commonwealth Gazette*, No. 108 of 1941, is cancelled.

Sixth Military District.

To be Honorary Captains.—George Maxwell Wilmore Clemons and John Given McMahon, 24th June, 1941.

To be Honorary Captain.—John Malcolm Gaskell, 3rd July, 1941.

Western Command.

Fifth Military District.

Honorary Captain K. L. Brooke-Cowden is appointed from the Reserve of Officers and to be Captain (provisionally), 17th June, 1941.

To be Captain (provisionally).—Manuel Starke, 20th June, 1941.

The resignation of Honorary Captain J. H. Coto of his commission is accepted, 19th June, 1941.

To be Honorary Captains.—Herbert Edward Hamilton Ferguson, 17th June, 1941; and Alexander Walters, 19th June, 1941.

Captain (provisionally) (Temporary Major) R. H. Crisp relinquishes the temporary rank of Major and is transferred to the Reserve of Officers (A.A.M.C.), 26th June, 1941.

Captain (Honorary Major) C. H. Leedman, M.C., is appointed from the Reserve of Officers (A.A.M.C.) and to be Major (provisionally), 14th January, 1941.

Seventh Military District.

Captain (Honorary Major) S. S. Roseberry is appointed from the Reserve of Officers (A.A.M.C.), 2nd Military District and to be Major (temporarily), 23rd June, 1941.

Captain (provisionally) V13599 A. J. Nathan is transferred from Australian Army Medical Corps, 3rd Military District, 23rd June, 1941.

ROYAL AUSTRALIAN AIR FORCE.

Permanent Air Force.

Medical Branch.

Temporary Squadron Leader C. J. N. Leleu is granted the acting rank of Wing Commander whilst employed in a Wing Commander post with effect from 1st July, 1941.

Citizen Air Force.

Medical Branch.

Squadron Leader (Acting Wing Commander) R. B. Davis is promoted to Temporary Wing Commander, with effect from 1st July, 1941.

Flight Lieutenant (Acting Squadron Leader) A. J. Terry is promoted to Temporary Squadron Leader, with effect from 1st July, 1941.

The following Flight Lieutenants are granted the acting rank of Squadron Leader whilst employed in Squadron Leader posts, with effect from 1st July, 1941: F. S. Parle, J. A. Game, A. S. De B. Cocks, J. C. Sangster, F. G. Steele, J. L. Walter, D. E. Davies, K. K. Stringer, J. J. Arnold and M. J. H. Hutchison.

The probationary appointment of Pilot Officer J. C. Watson is confirmed, and he is promoted to Flying Officer, with effect from 1st March, 1941.—(Ex. Min. No. 111—Approved 24th July, 1941.)

The following are appointed to commissions on probation, with the rank of Flight Lieutenant, with effect from the dates indicated: John Halliday Coto, M.B., B.S., 13th June, 1941; and John Hall-Johnston, M.B., B.S., 16th June, 1941.

Medical Branch Reserve.

Flight Lieutenant F. J. Moss is transferred from the Active List to the Reserve, with effect from 25th June, 1941.

The following are appointed to the Reserve, with the rank of Flight Lieutenant, with effect from the dates indicated: John Bazil Cole, L.R.C.P., L.R.C.S., L.R.F.P.S., Raymond Lindsay Douglas, M.B., B.S., Henry Emerson Wescombe Lyons, M.B., B.S., 1st June, 1941; Douglas Arthur Carter, M.B., B.S., 9th June, 1941; Travis Wilhelm Vorrath, M.B., B.S., Gordon Buckland, B.D.S., 1st July, 1941.—(Ex. Min. No. 112—Approved 24th July, 1941.)

Correspondence.

VACCINE THERAPY.

SIR: In giving vaccine therapy should we avoid any reaction or should we aim at producing some? The following story, which I tell against myself, is interesting. K.S., who was allergic to certain grass seeds, brought his new bottle of D strength. He was "fed up" with the length of time we had taken to work up with very little apparent result. He had had several doses of one cubic centimetre of D strength. Acting against instruction, I allowed him to talk me into giving the whole cubic centimetre. Although I had asked him to remain in town for an hour, he drove home four miles. Soon after, an urgent message from his wife told me that he was "dangerously ill and choking". I endeavoured to hit eighty on my journey, being delayed by a large flock of sheep (his sheep) on the river bridge, through which I sent my car like a snow plough. His heart and our friendship stood the strain. I thought it tactful to avoid suggesting further injections. He saw me a few days ago and said: "Since you gave me the extra-extra dose in 1936 I have been absolutely free and a different man. Thirty-five years of worry over the business I had endured. So it is a cure, but a severe one."

I am not suggesting this as a routine procedure, but it makes one think that perhaps avoiding all reaction is not an advantage.

Yours, etc.,

H. O. LETHBRIDGE.

Narrandera,
New South Wales.
Undated.

Post-Graduate Work.

COURSE IN SURGERY AT SYDNEY.

THE New South Wales Post-Graduate Committee in Medicine announces that a course suitable for (*a*) candidates for Part II of the examination for the degree of master of surgery and (*b*) general revision in surgery will be held from September 22 to November 28, 1941, subject to a minimum of four applications being received. Candidates must notify of their intention to attend the course not later than August 23.

The fee is ten guineas for the course, which will be held in the afternoons only at the following places: Prince Henry Hospital, Royal Prince Alfred Hospital, Saint Vincent's Hospital, Sydney Hospital, the University of Sydney.

Copies of the tentative programme are available from the Secretary, New South Wales Post-Graduate Committee in Medicine, the Prince Henry Hospital, Little Bay, to whom applications for registration must be made before August 23, 1941.

LIBRARY SEMINAR AT SYDNEY.

THE New South Wales Post-Graduate Committee in Medicine announces that the next library seminar arranged by the Post-Graduate Directors of Medicine, Surgery and Pathology will be held at the Prince Henry Hospital, Little Bay, New South Wales, on Monday, August 11, 1941, at 4.30 o'clock p.m. The subjects will be: (*a*) local application of sulphonamides, (*b*) obesity. A cordial invitation to be present is extended to all medical practitioners.

Obituary.

FRANCIS ANTILL POCKLEY.

FOR the following account of the career of the late Dr. Francis Antill Pockley we are indebted to "an old friend and colleague", who wishes to remain anonymous.

By the death of Francis Antill Pockley the profession of medicine loses one of its most distinguished members and the doyen of ophthalmic practice in Australia. He was born in 1857 in Sydney, the son of Captain Robert Pockley, a seaman of renown in his day, a scion of a very old Yorkshire family, actually of Doomsday vintage. This seafarer was born in 1823 and came to Australia first as a boy of ten in his father's ship. Pockley's mother was Selina Antill, the youngest daughter of Major Henry Antill, who was A.D.C. to Governor Macquarie in 1809 and was granted the estate of "Jarvisfield" near Picton, which is still in the possession of the Antill family. This Major Antill had been an ensign in the Black Watch and served under Wellington—Frank Pockley was therefore on both sides of pioneer stock and was justly proud of it. The Pockleys were prolific people, and so young Pockley early tackled work and spent several years in acquiring business knowledge, chiefly, I think, in the Commercial Bank of Sydney—a training which was of real use to him in later life in teaching him method and order in the conduct of his affairs and the handling of

the various public meetings over which he was called upon to preside. But it caused him to be a little older than the average medical student when he began his professional curriculum at the University of Edinburgh.

In Sydney he was a Grammar School boy and did well at that excellent colonial school. Later, when he actually started medicine in Edinburgh he rapidly made his mark as a brilliant student. Few men indeed can have done better. He graduated in the very shortest time then possible, and with first-class honours. He was unique in his year in that he took honours or medals in every subject of the course, and was, I believe, first man of his year, gaining several bursaries and scholarships.

After post-graduate work in Vienna and house surgeoncies in Edinburgh he had the good fortune to get one of the coveted appointments of a surgeon-superintendentship to one of our New South Wales emigrant ships, a steamer—I think the first of her class, for she was the ship in which triple expansion engines were first installed. This was the Aberdeen White Star *Aberdeen*, and she actually embarked about 1,000 souls. The voyage was not without incident and trouble; various infective diseases broke out, and a mutiny of sorts took place; an inquiry followed in Sydney, but Pockley emerged from it with complete *éclat*. He now settled down to work, at first in general practice, which was, of course, a priceless form of experience, in North Sydney, where, I think, there were perhaps four other doctors. But Pockley, by education and natural bent, fairly soon turned to that specialty which was to become his life's work. Pockley was actually in Vienna when Köhler stumbled on the anæsthetic properties of cocaine, and he brought out with him three grains of that substance, for which he paid £3. He did, I believe, the first eye operation in Australia under the anæsthetic of cocaine—an extraction of a cataract—and associated with him was Dr. R. D. Ward, the first practitioner in North Sydney, who about thirty years earlier had actually assisted Frank Pockley's entry into this most difficult world. I think he was one of the first four men in New South Wales who definitely became full-time eye specialists, the others being Morgan, Evans and Odillo Maher. Presently luck fell his way, but he had merit as well, and he may be said to have been fairly launched as an eye specialist when he became lecturer in ophthalmic medicine and surgery in the newly organized medical school of the Sydney University, an appointment which, I think, carried with it the post of ophthalmic surgeon at the Prince Alfred Hospital. I believe Pockley actually held the lectureship for thirty-seven years—a record period. Of his ability as a teacher others are better fitted to speak; but as an operator and a wise man in eye troubles certainly he must have ranked high in any centre of medical work, here or at home, for he was really an outstanding exponent of his own line of work.

That the profession held him in high esteem is shown by the unusual number of posts of distinction to which his brethren, wishing to give him honour, called him. And these Pockley filled with useful work and credit. Among such hallmarks of esteem he attained the presidentship of the New South Wales Branch of the British Medical Association, the presidentship of the Australian Medical Congress of 1911, at which he exercised a most generous hospitality to a great gathering of men from many distant places. He was president of the Ophthalmological Society and held many other public positions during his long career. He will probably perhaps be best remembered in the future by being one of the founders of the Royal Australasian College of Surgeons.

Pockley had many deserved successes in his life. He rose high in usefulness, capacity and merit in his profession and in the estimation of his fellows, but, alas, suffered several cruel blows, for he actually lost three splendid children. His son Brian, a fine young doctor, volunteered, as one would have expected, in 1914 and went to New Guinea, where he was killed in action, a really needless fatality. I rather think he was the first Australian from New South Wales who lost his life in the war "which was to end wars". Then later, in 1918, a second fine boy gave his life in France. Two blows of so deadly a character were bad enough; but there was more to come, for his elder daughter, who had married a distinguished naval officer, died after an operation on the throat, not usually regarded as a major surgical procedure. Of his five children, two survive—one the well-known oculist of his name, and a daughter.

His later years of comparative desuetude have therefore been saddened by these three domestic blows, so crushing and devastating, and to them of late was added the misery of chronic ill health. It is so hard to keep a stiff upper lip to the nagging misery of frequent pain and disability, and that is just what Frank Pockley has been called to endure for a number of years.

Pockley cultivated various hobbies, and in most of them he was somewhat of a pioneer. He was an early motorist of great ability. He loved long and lonely treks. Why, even in quite recent years he took a small party through north-west Queensland, North and Central Australia, and down far south before finally returning to Sydney, and that without any skilled mechanically minded young men to help him. He was the driving force of a not inconsiderable expedition. Years ago he was no small artist in photography, and in any new method or procedure in his profession he was always keen to be there or thereabouts. He knew one branch of literature well: that was Australian history; and often have I liked listening to him talking with knowledge and enthusiasm on it. It was a very personal interest in his heart and mind. Concerning the history of North Sydney he was a veritable mine of lore, domestic and geographical.

Well, I hope I have said sufficient to make those of my readers who did not know him realize that Pockley was no ordinary man. He had splendid brains, real industry, and helped to place ophthalmology in its proper position in the intricate fabric of modern medical and surgical teaching. He was a great practitioner of his art, and from all points one should say that he carried on the traditions of his forebears and was an admirable and useful colonist.

Dr. J. Lockhart Gibson writes:

I have been asked to write an appreciation of the late Francis Antill Pockley from an ophthalmologist's point of view.

Although junior to him in age, I was senior to him by two years in graduating at Edinburgh University. I had found myself quite at home in Edinburgh and went to the university from one of its schools. Frank Pockley had taken time to acquire some business experience before coming home for medicine.

We did not become really acquaint, to use a Scoticism, until he came to Vienna with his friend Purchas, of Auckland, in 1884. We had been friends since then. He was a strong man both mentally and physically. We had little time to play in Vienna; there was so much to learn in all departments of medicine, and Pockley recognized that to be of real use in the world you had to see patients whole and not as bodies attached to eyes.

I did not see Frank Pockley again until the 1892 congress in Sydney. He had then established a large general practice in the North Shore and was preparing to confine himself to ophthalmology in Macquarie Street. His success was rapid and continuous. He took his work seriously and it was always a pleasure and a profit to talk "shop" with him. He was interested not only in his own work, but in that of others. He kept himself up to date. He had his own views and held them strongly, but was always ready to accept convincing argument or facts.

It was in 1892 that he told me of a girl child who had suffered from an attack of tubercular meningitis followed by optic atrophy and recovery. I remember questioning his diagnosis at the time, because the patient was still living. On journeying together to the Adelaide Congress in 1905, I said to him: "By the way, Pockley, that little patient you diagnosed as optic atrophy from tubercular meningitis was almost certainly a case of ocular plumbism." He was ready to accept the suggestion, and added: "and she came from Queensland. She is teaching music in Sydney now." He was not satisfied with saying that to me. He told the Ophthalmological Section at the Adelaide Congress that he accepted my diagnosis. I showed later that such cases are due to increased intracranial tension (lead encephalopathy), that the alternatives were tubercular meningitis or cerebral tumour.

Pockley always attended medical congresses. He took congresses seriously and was out to share his knowledge and to acquire knowledge and understanding at the meetings. He was not averse to games, but they did not form part to him of congress meetings. He was always listened to with respect. His papers were comprehensive and included the work of others as well as his own.

I remember a cataract case of his who returned to Queensland somewhat prematurely supplied with correction and later visited me. I found that with an adjustment of his correction he could be made to see 6/5, and told Pockley so. He was satisfied that it was "good enough". It is what all of us aim at. At the 1908 congress in Melbourne he was told on the morning of the big dinner that, as president-elect of the next congress, he would have to propose the Governor's health. In some trepidation, but with his usual thoroughness he visited libraries and acquired an intimate knowledge of Sir Thomas Gibson Carmichael's career. He went into this meticulously in his speech, even mentioning his interest in spiders. He cherished the Governor's answer, and used to tell it. The Governor, a

paukey Scot, began: "I feel like the woman of Samaria because Dr. Pockley has told me all that ever I did."

Pockley retired from work some years ago, but did not lose his keenness. I feel that I have lost a valued colleague and friend. I used to enjoy visiting him and sometimes staying at his delightful home, "Gray-stanes", and it was always a pleasure to see him in Brisbane. I was never able to join him in one of his caravan excursions. He appeared to enjoy them even after the age when most of us prefer the comfort of our homes.

He spent much time and labour in his beautiful garden, and it did him credit. He lost two very fine sons in what we can call no longer the "great war". His mantle as an ophthalmologist has descended on a son and a grandson, so that the good he did lives after him. May it continue to do so for many generations to come.

University Intelligence.

THE UNIVERSITY OF SYDNEY.

A MEETING of the Senate of the University of Sydney was held in July, 1941.

The Diploma in tropical medicine was awarded to Kevin Vigors Earle, Colin Spencer Graham, Trevor William Jenkins, John Douglas Thompson.

The following members of the professoriate have been appointed as representatives of the university on the Board of Secondary School Studies for a period of four years from August, 1941: Professor H. Priestley, Professor S. H. Roberts, Professor Ian Clunies Ross, Professor A. D. Trendall, Associate Professor E. M. Wellish.

The university was informed by the Elders' Trustee and Executive Company, Limited, of Adelaide, that, under the will of the late Hugh Hughes, of Eureka Station, Broken Hill, the university would receive the net income of half the residuary estate. This benefaction is for the purpose of establishing, maintaining, promoting and encouraging the study of veterinary science at the university. The company reported that the benefaction was a considerable one and that the value of the residuary estate would amount to about £90,000.

Dr. E. S. Wallace has been appointed by the Senate Acting Professor of Dentistry during the absence on leave of Professor A. J. Arnott.

The following appointments were made: Mr. N. W. Kestel as part-time Demonstrator in Dentistry; Dr. J. G. Collins and Dr. Jean Collier as Assistant Lecturers in Pathology; Dr. H. A. Ridler as a member of the Post-Graduate Committee in Medicine, representative of the Royal Hospital for Women; Dr. R. J. Silverton as a member of the Post-Graduate Committee in Medicine, representative of the Royal North Shore Hospital.

Nominations and Elections.

THE undermentioned have applied for election as members of the New South Wales Branch of the British Medical Association:

Roach, Frederica Valentine, M.B., B.S., 1939 (Univ. Sydney), Women's Hospital, Crown Street, Sydney.
Mackey, Robert, M.B., B.S., 1938 (Univ. Sydney), Women's Hospital, Crown Street, Sydney.

The undermentioned have applied for election as members of the South Australian Branch of the British Medical Association:

Crosby, Raymond Wilbur Louis, M.B., B.S., 1940 (Univ. Adelaide), Royal Adelaide Hospital, Adelaide.
Levi, Elja Haims, L.R.C.P. and S. (Edinburgh), L.R.F.P.S., 1939 (Glasgow), Royal Adelaide Hospital, Adelaide.

The undermentioned have been elected as members of the South Australian Branch of the British Medical Association:

De Vedas, Jack, M.B., B.S., 1938 (Univ. Adelaide), South Terrace, Adelaide.
Gratton, Marshall Gladstone, M.B., B.S., 1941 (Univ. Adelaide), Scotch College, Mitcham.
Reid, Max Bertram, M.B., B.S., 1937 (Univ. Adelaide), Uraidla.

Books Received.

"Psychology and Mental Disorders for Nurses", by J. W. Fisher, M.R.C.S., L.R.C.P., D.P.H., D.P.M., with a foreword by E. Casson, M.D., Ch.B., D.P.M.; 1941. London: Edward Arnold and Company. Crown 8vo, pp. 128. Price: 4s. net.

"Hygiene in Simple Language: Military and Civil", by C. N. Atkins, E.D., M.B., Ch.B., D.P.H.; 1941. Melbourne: Ramsay, Ware Publishing Proprietary Limited. Demy 8vo, pp. 116. Price: 12s. 6d. net.

Diary for the Month.

AUG. 12.—Tasmanian Branch, B.M.A.: Branch.
AUG. 12.—New South Wales Branch, B.M.A.: Executive and Finance Committee.
AUG. 14.—Victorian Branch, B.M.A.: Ethics Subcommittee.
AUG. 18.—Victorian Branch, B.M.A.: Hospital Subcommittee.
AUG. 19.—New South Wales Branch, B.M.A.: Ethics Committee.
AUG. 19.—Victorian Branch, B.M.A.: Organization Subcommittee.
AUG. 19.—Victorian Branch, B.M.A.: Finance, House and Library Committee.
AUG. 20.—Western Australian Branch, B.M.A.: Branch.
AUG. 21.—New South Wales Branch, B.M.A.: Clinical Meeting.
AUG. 21.—Victorian Branch, B.M.A.: Executive.
AUG. 22.—Queensland Branch, B.M.A.: Council.

Medical Appointments: Important Notice.

MEDICAL PRACTITIONERS are requested not to apply for any appointment mentioned below without having first communicated with the Honorary Secretary of the Branch concerned, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

New South Wales Branch (Honorary Secretary, 135, Macquarie Street, Sydney): Australian Natives' Association; Ashfield and District United Friendly Societies' Dispensary; Balmain United Friendly Societies' Dispensary; Leichhardt and Petersham United Friendly Societies' Dispensary; Manchester Unity Medical and Dispensing Institute, Oxford Street, Sydney; North Sydney Friendly Societies' Dispensary Limited; People's Prudential Assurance Company Limited; Phœnix Mutual Provident Society.

Victorian Branch (Honorary Secretary, Medical Society Hall, East Melbourne): Associated Medical Services Limited; all Institutes or Medical Dispensaries; Australian Prudential Association, Proprietary, Limited; Federated Mutual Medical Benefit Society; Mutual National Provident Club; National Provident Association; Hospital or other appointments outside Victoria.

Queensland Branch (Honorary Secretary, B.M.A. House, 225, Wickham Terrace, Brisbane, B.17): Brisbane Associated Friendly Societies' Medical Institute; Bundaberg Medical Institute. Members accepting LODGE appointments and those desiring to accept appointments to any COUNTRY HOSPITAL or position outside Australia are advised, in their own interests, to submit a copy of their Agreement to the Council before signing.

South Australian Branch (Honorary Secretary, 178, North Terrace, Adelaide): All Lodge appointments in South Australia; all Contract Practice appointments in South Australia.

Western Australian Branch (Honorary Secretary, 205, Saint George's Terrace, Perth): Wiluna Hospital; all Contract Practice appointments in Western Australia.

Editorial Notices.

MANUSCRIPTS forwarded to the office of this journal cannot under any circumstances be returned. Original articles forwarded for publication are understood to be offered to THE MEDICAL JOURNAL OF AUSTRALIA alone, unless the contrary be stated.

All communications should be addressed to the Editor, THE MEDICAL JOURNAL OF AUSTRALIA, The Printing House, Seamer Street, Glebe, New South Wales. (Telephones: MW 2651-2.)

Members and subscribers are requested to notify the Manager, THE MEDICAL JOURNAL OF AUSTRALIA, Seamer Street, Glebe, New South Wales, without delay, of any irregularity in the delivery of this journal. The management cannot accept any responsibility or recognize any claim arising out of non-receipt of journals unless such a notification is received within one month.

SUBSCRIPTION RATES.—Medical students and others not receiving THE MEDICAL JOURNAL OF AUSTRALIA in virtue of membership of the Branches of the British Medical Association in the Commonwealth can become subscribers to the journal by applying to the Manager or through the usual agents and booksellers. Subscriptions can commence at the beginning of any quarter and are renewable on December 31. The rates are £2 for Australia and £2 5s. abroad *per annum* payable in advance.